

August 11, 1997

EPA-SAB-EC-97-006

Honorable Carol M. Browner  
Administrator  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, DC 20460

Subject: Science Advisory Board (SAB) Award Recommendations for the  
1996 Scientific and Technological Achievement Awards (STAA)  
Program

Dear Ms. Browner:

The Science Advisory Board's (SAB) 1996 Scientific and Technological Achievement Awards (STAA) Subcommittee has completed its review of the 135 nominations (including over 200 individual scientific and technical papers) submitted by the Agency for this year's awards program. As you are aware, the STAA program is sponsored by the Office of Research and Development (ORD), which continues to do a creditable job in soliciting and assembling these nominations. Each year (except for 1995 during the governmentwide shutdown) the Board convenes a special panel to review nominated papers published by Agency researchers. Our recommendations for awards and further improvements in the STAA program are discussed in the enclosed report.

The Subcommittee feels that the overall quality of the papers nominated for the 1996 Program is commendable. The increased percentage of papers (39%) recommended for awards this year, compared to the last time the review was conducted in 1994 (32%), is reflective of that fact. We attribute this increase in recommended awards to a clear improvement in how ORD manages the program, ensuring that the best nominations are forwarded for consideration. Although the papers were generally deserving, we choose only those nominations and papers that we collectively felt merited recognition at the award levels of the STAA program. Those papers that were not selected for Level I, II, or III awards, or for Honorable Mention are not inferior papers, but rather reflect the overall strength of the competition.

The Subcommittee is recommending a total of 53 awards, including awards for nominations in all seven nomination categories. There were four other categories;

however, nominations were not solicited for those categories this year. For the second year, an award was recommended in the Risk Management and Policy Formulation category. In addition, the Subcommittee is recommending seven papers for Honorable Mention. The authors recommended for awards this year are from eleven research laboratories within the Office of Research and Development, from the Office of Radiation and Indoor Air, and from the Office of Pollution Prevention and Toxics.

The Subcommittee continues to encourage the Agency to nominate peer-reviewed papers from all programs and areas of scientific research because scientific and technological achievements should not be limited to ORD or to EPA laboratories. The process of publishing EPA scientific findings in peer reviewed journals enhances the rigor of the science and the reputation of the Agency and its programs. Managers should provide opportunities for their program scientists and engineers to publish the data and technical analysis which supports the Agency's policies and regulations. To ensure greater participation by all program areas of the Agency, we recommend that ORD announce this program earlier and advertise it more broadly next year.

The Subcommittee continues to feel that the STAA program is an important mechanism for recognizing and promoting high quality, peer-reviewed work published in top scientific and technological journals. This is even more critical as Agency programs continue to improve their overall commitment to, and compliance with, your Peer Review Policy. Furthermore, it supports your emphasis on sound science forming the basis for sound decisions.

We are pleased to have participated in this process once again and believe it is appropriate for the Board to continue this annual review function. We would appreciate being informed of the final disposition of awards, and we look forward to serving the Agency again in this important activity.

Sincerely,

/signed/  
Dr. Genevieve Matanoski, Chair  
Executive Committee  
Science Advisory Board

/signed/  
Dr. William Glaze, Chair  
Scientific and Technological Achievement  
Awards Subcommittee

## **NOTICE**

This report has been written as a part of the activities of the Science Advisory Board, a public advisory group providing extramural scientific information and advice to the Administrator and other officials of the Environmental Protection Agency. The Board is structured to provide balanced expert assessment of scientific matters related to problems faced by the Agency. This report has not been reviewed for approval by the Agency; and hence, the contents of this report do not necessarily represent the views and policies of the Environmental Protection Agency or other agencies in the Federal government. Mention of trade names or commercial products does not constitute a recommendation for use.

## **ABSTRACT**

This report represents the conclusions and recommendations of the U.S. Environmental Protection Agency's Science Advisory Board regarding the 1996 EPA Scientific and Technological Achievement Awards (STAA) program. The STAA Program is an Agencywide competition to promote and recognize scientific and technological achievements by EPA employees, fostering a greater exposure of EPA research to the public. The Program was initiated in 1980 and is managed by the Office of Research and Development.

The STAA Subcommittee of the Science Advisory Board reviewed and evaluated the 135 nominations (including over 200 scientific and technical papers) in seven categories for the 1996 STAA awards. The Subcommittee recommended 53 nominations (39 percent of the nominations) for awards at three levels and also recommended that seven additional papers be recognized with Honorable Mention. The Subcommittee recommended awards for nominations from 11 Office of Research and Development (ORD) research laboratories, the Office of Radiation and Indoor Air, and the Office of Pollution Prevention and Toxics. The Subcommittee encouraged the Agency to continue support for the STAA program as a mechanism for recognizing and promoting high quality research in support of the Agency's mission.

**KEY WORDS:** Awards, Scientific Achievements, Peer-Review

**ENVIRONMENTAL PROTECTION AGENCY  
SCIENCE ADVISORY BOARD  
1996 SCIENTIFIC AND TECHNOLOGICAL  
ACHIEVEMENT AWARDS SUBCOMMITTEE ROSTER**

May 29-30, 1997 Meeting

**CHAIR**

**Dr. William Glaze**, Professor, Department of Environmental Sciences and Engineering,  
School of Public Health, University of North Carolina, Chapel Hill, NC

**MEMBERS/CONSULTANTS ATTENDING THE MEETING**

**Dr. Richard Bull**, Senior Staff Scientist, Battelle Pacific Northwest Laboratories,  
Molecular Biosciences, Richland, WA

**Dr. Roger Cochran**, Staff Toxicologist, Medical Toxicology Branch, Department of  
Pesticide Regulation, California EPA, Sacramento, CA

**Dr. Deborah Cory-Slechta**, Associate Professor, Department of Neurobiology and  
Anatomy, University of Rochester Medical School, Rochester, NY

**Dr. Richard T. Di Giulio**, Associate Professor, Nicholas School of the Environment,  
Duke University, Durham, NC

**Dr. Roger Kasperson**, Provost, Center for Technology, Environment and  
Development, Clark University, Worcester, MA

**Dr. Allan Legge**, President, Biosphere Solutions, Calgary, Alberta, Canada (attended  
meeting via teleconference)

**Dr. William Smith**, Professor, School of Forestry and Environmental Studies, Yale  
University, New Haven, CT

**Dr. Michael Trehy**, Senior Research Specialist, Monsanto Company, St. Louis, MO

**Dr. C. H. (Herb) Ward**, Foyt Family Chair of Engineering, Director, Energy &  
Environmental Systems Institute, Professor, Departments of Environmental  
Science & Engineering and Ecology & Evolutionary Biology, Rice University,  
Houston, TX

**Dr. Judith S. Weis**, Professor, Rutgers University, Department of Biological Sciences,  
Newark, NJ

**MEMBERS/CONSULTANTS NOT ATTENDING THE MEETING (But who provided written analysis for discussion at the meeting)**

**Dr. Herb Allen**, Professor, Department of Civil and Environmental Engineering, University of Delaware, Newark, DE (did not attend meeting)

**Dr. Diane L. Elliot**, Professor of Medicine, Oregon Health Sciences University, Portland, OR (did not attend meeting)

**Dr. Ben Ewing**, Professor Emeritus, University of Illinois at Urbana Champaign, Lummi Island, WA (did not attend meeting)

**Dr. James Lamb**, Vice President, Science and Technological Services, Jellinek, Schwartz, Connolly and Freshman, Arlington, VA (did not attend meeting)

**Dr. James E. Woods**, Professor, Virginia Polytechnic Institute and State University, Falls Church, VA (did not attend meeting)

**SCIENCE ADVISORY BOARD STAFF**

**Mr. A. Robert Flaak**, Designated Federal Official, U.S. EPA, Science Advisory Board (1400), 401 M Street, SW, Washington, DC 20460

**Mrs. Dorothy Clark**, Staff Secretary, U.S. EPA, Science Advisory Board (1400), 401 M Street, SW, Washington, DC 20460

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## 1. EXECUTIVE SUMMARY

The Scientific and Technological Achievement Awards (STAA) Subcommittee of the Science Advisory Board (SAB) reviewed and evaluated the 1996 nominations for the STAA program. The Subcommittee evaluated 135 nominations (including over 200 individual scientific and technical papers) that were submitted by EPA research laboratory directors and program office directors. The Subcommittee met in Washington, D.C., on May 29-30, 1997, to determine award recommendations.

The STAA review program is a long-standing partnership between the Agency and the Science Advisory Board. Each year since 1980 Agency scientists and engineers submit nominated scientific papers through an internal Agency review process managed by the Office of Research and Development (ORD). (Note: The Agency did not conduct the STAA Program during 1995 when there was a governmentwide shutdown.) This review process ensures that the best scientific papers are submitted to the SAB for evaluation in the awards process. The SAB convenes an experienced group of scientists and engineers who meet in a closed meeting to review and evaluate the nominations. The SAB review panel produces a set of award recommendations which ORD uses in preparing the actual awards.

This year, the Subcommittee recommended 53 nominations for awards and recommended that seven additional papers be recognized with Honorable Mention. The Subcommittee applied the evaluation criteria evenly across all nomination categories, without attempting to ensure equal numbers or percentages of awards in each category. The Subcommittee recommended awards for nominations from 11 ORD research laboratories, the Office of Radiation and Indoor Air, and the Office of Pollution Prevention and Toxics.

## 2. INTRODUCTION

### 2.1 Request for Science Advisory Board (SAB) Review

At the request of the Office of Research and Development (ORD), the Science Advisory Board convened a subcommittee to review and evaluate scientific and technological papers published in peer-reviewed journals by EPA authors and nominated for the 1996 EPA Scientific and Technological Achievement Awards (STAA) program. The STAA Subcommittee was asked to evaluate nominated papers for awards based on the rules developed by ORD. In December 1996, the Office of Research and Development (ORD) provided the SAB with copies of 141 nominations (later reduced to 135 nominations by the Subcommittee - see Section 3.4a) for more details), and the 1996 STAA Nomination Procedures and Guidelines, which describe the award levels, eligibility criteria (including the minimum EPA contribution and employer status of the principal author), and the criteria the SAB should use to evaluate the nominations. ORD grouped the papers into seven categories of science and technology<sup>1</sup>, and screened the papers for conformance with the nomination guidelines. No nominations were solicited in four additional categories this year.<sup>2</sup>

As described in the 1996 STAA Nomination Procedures and Guidelines, the SAB was asked to recommend papers for each of three Levels of Award.

- a) Level I awards - are for authors who have accomplished an exceptionally high-quality research or technological effort with national significance. These awards recognize the initiation or general revision of scientific/technological principles or procedures, or highly significant improvement in the value of a device, activity, program, or service to the public. The cash award for this level is \$5,000 divided among the EPA eligible authors, based on their individual level of effort as defined in the nomination.
- b) Level II awards - are for authors who have accomplished a notably excellent research or technological effort. These awards are for research with timely consequences which contributes to an important achievement within its discipline or field of study. The cash award for this level is

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<sup>1</sup> These categories are: Control Systems & Technology (CS), Ecology & Ecosystem Risk Assessment (EC), Health Effects & Health Risk Assessment (HE), Monitoring & Measurement Methods (MM), Transport & Fate (TF), Review Articles (RA), and Risk Management and Policy Formulation (RM).

<sup>2</sup> These categories are: Integrated Risk Assessment, Social Science Research, Environmental Education, and Environmental Trends for Drivers of Future Risk.

\$2,500 divided among the EPA eligible authors, based on their individual level of effort as defined in the nomination.

- c) Level III awards - are for authors who have accomplished an unusually notable research or technological effort. Research for this award must relate to a mission or organizational component of the EPA, or significantly affect a relevant area of science/technology. The cash award for this level is \$1,000 divided among the EPA eligible authors, based on their individual level of effort as defined in the nomination.
  
- d) Honorable Mention - The Subcommittee has also added a fourth non-cash level award for papers which are noteworthy but which do not warrant a Level I, II or III award - these are recommended for Honorable Mention.

## **2.2 Subcommittee Review Procedures**

The Review Panel was convened as an *ad hoc* subcommittee of the SAB's Executive Committee. Membership included a significant number of returning STAA panelists; consequently, the level of experience with the process matched the level of scientific and technical expertise. In addition, many panelists hold editorial positions on highly regarded scientific journals.

Copies of all nominations/papers and the award program guidelines and nomination evaluation criteria were provided to Subcommittee members in advance of the review meeting. Subcommittee members selected papers to review based on their expertise, being sure to select papers from across all nomination categories. Typically, each member choose about 30 nominations to review. Members were encouraged to include nominations from areas outside of their own expertise as well as areas with which they were more familiar. As part of the evaluation, Subcommittee members were also asked to rank their own expertise in the field of science and technology addressed by each paper they selected for review. Each paper was read by at least two (and usually more) qualified Subcommittee members and then presented to the full Subcommittee and discussed during the review and evaluation meeting that was held in Washington, DC on May 29-30, 1997.

In reviewing the papers, the Subcommittee members qualitatively considered evaluation criteria factors such as: the overall impact of the nominated paper(s) on scientific knowledge or technology relevant to environmental issues; the level of effort; the creativity, originality, initiative, and problem solving ability of the researchers; the beneficial impacts of the accomplishments and the recognition of the results outside the Agency; the extent to which an Agency function, mission, program, activity, or service is

improved; and the nature and extent of the peer review, including the stature of the journal.<sup>3</sup>

Prior to the review and evaluation meeting, Subcommittee members forwarded the results of their review to the Designated Federal Officer (DFO) for the Subcommittee. The initial ranking along with the self-professed expertise of each reviewer for that particular nomination was compiled by the DFO in a tabular format (see Table I for an example) and then used at the review and evaluation meeting to help focus the discussion on each individual nomination. Initial individual rankings were subject to change based on discussions at the review and evaluation meeting. The final ranking agreed to at that meeting is a consensus ranking. The examples given in Table I are illustrative.

**Table I - Example of how Initial Individual Reviewer Rankings are Compiled** (Data for discussion purposes only)

Nomination Number	Title of Nomination	Reviewer			
		Name	Expertise *	Initial Ranking	Final Ranking (at meeting)
HE9999	Risk Assessment: Trinitrochicken wire	Dr. Smith	2	NR	NR
		Dr. Jones	3	III	
		Dr. Adams	4	NR	
EC9999	Ecological Impacts of Trinitrochicken wire	Dr. Smith	4	NR	III
		Dr. Jones	3	III	
		Dr. Adams	2	III	
		Dr. Williams	3	III	
RA9999	Trinitrochicken wire - A Review	Dr. Black	3	I	I
		Dr. Green	4	I	
		Dr. Smith	3	I	
		Dr. Jackson	2	II	
		Dr. White	1	NR	

\* Expertise levels are rated as follows: 1 = not related to major discipline of reviewer; 2 = general knowledge of research area; 3 = general knowledge of active research; and 4 = specific area of active research. NR = Not Recommended for an award.

The Subcommittee met on May 29-30, 1997, in Washington, DC in a closed session due to the discussions of individual performance and potential cash awards. Consistent with the requirements of the Federal Advisory Committee Act (Public Law 92-463) and the Government in the Sunshine Act (5 USC 552(b)(c)(2) and (c)(6)), this

<sup>3</sup> These criteria are discussed more fully in section VII of the 1966 Nomination Procedures and Guidelines provided to the Subcommittee by the Agency.

closed meeting was announced in a Federal Register<sup>4</sup> notice signed by the EPA Administrator. Five Subcommittee members were not present at the meeting, but provided written materials relevant to their reviews; one additional member was not present at the meeting; however, he participated via teleconference. The Subcommittee developed preliminary ratings for papers in each category, including discussion of each nominated paper. The Subcommittee made note of papers that had been incorrectly categorized, so that the final report recommendations would accurately reflect the subject areas of the nominated papers (see Appendix A). After completing all preliminary evaluations, the Subcommittee revisited the recommendations category by category to resolve any final issues and ensure consistency in applying the award criteria across categories.

This Subcommittee report was reviewed and approved by the SAB's Executive Committee (EC) at its July 23-24, 1997 meeting in Washington, DC. At that meeting, the Subcommittee report, less the actual award recommendations (Appendices A & B), was made available to the interested public.

### **2.3 Written Commentary on Nominations**

As part of the review process this year, the Agency asked that the Subcommittee provide written commentary on each nomination that was reviewed during the evaluation process. This request applied especially to those nominations that were not deemed deserving of a Level I, II or III award. Please see section 3.2 of this report for further discussion of this request.

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<sup>4</sup> 62(85) Federal Register 24108, May 2, 1997.

### **3. EVALUATION OF THE 1996 SCIENTIFIC AND TECHNOLOGICAL ACHIEVEMENT AWARDS NOMINATIONS**

#### **3.1 General Findings of the Subcommittee**

The Subcommittee felt that the overall quality of the papers nominated was good, in fact, better than in previous years. The Agency should continue to focus on improving the quality of its in-house research. The STAA program is an important mechanism for recognizing and promoting high quality, peer-reviewed work published in top scientific and technological journals. The authors recommended for awards this year represent eleven ORD research laboratories, the Office of Radiation and Indoor Air, and the Office of Pollution Prevention and Toxics. The Subcommittee recommends that ORD request the submission of nominations earlier, and advertise the program more aggressively, so that program offices have adequate time to prepare their nominations.

The Subcommittee also encourages the Agency to continue to broaden the scope of nominated papers and to promote multi-disciplinary research and those that directly support risk management and policy decisions. In evaluating nominations for awards, the Subcommittee looked for papers with well-developed hypotheses, good sampling or experimental design, where the theoretical basis is verified by field validation or through testing of a model. We also looked for innovative applications of theories from other disciplines and collaborations of interdisciplinary teams of scientists and engineers.

In order to evaluate papers that present incremental results in a series of published works, the Subcommittee recommends that the nomination guidelines prepared by ORD explicitly require discussion of related research published previously by the lead author(s), including information on any STAA awards given. When possible, and within the limitations suggested in Section 3.3.a) on page 8, nominations should include all papers in a series, providing they are within the time limit. This would allow a series of incremental studies to be evaluated for an award as a package.

The 1996 STAA program represents the second time that the STAA Subcommittee has recommended a paper in the Risk Management and Policy Formulation category for an award. The Subcommittee hopes to see more peer reviewed papers nominated in the Risk Management and Policy Formulation category next year, as this is an important area of research for the Agency. The Subcommittee feels that the process of converting Agency policy analysis and the technical foundations of its rule making into scientific articles for peer review is essential to maintain the quality in its science. This is also an important way to improve the Agency's reputation for scientific achievement. Laboratory directors and program managers should encourage the authors of policy

formulation papers and regulatory impact analyses to develop technical articles for peer reviewed literature.

Finally, the Subcommittee believes that the STAA program provides one view of the technical and scientific progress that the Agency is making in various areas of research. This year's activities represent strengths in a variety of technological assessments, analytical measurements, and in certain areas of human health effects research. The Subcommittee would also like to continue to encourage the nomination of more, high quality peer reviewed papers related to the following categories:

- a) Watersheds and Ecosystem protection
- b) Environmental Risk Communication and Perception
- c) Social Science Research on Risks
- d) Environmental Economics-technical support for regulatory impact analyses
- e) Environmental Education
- f) Ecological Risk Assessment-including assessments of landscape scale changes
- g) Environmental Trends for Drivers of Future Risks-demographics, energy, consumerism, technology
- h) Exposure Assessment

### **3.2 Providing Written Commentary on Nominations**

As part of the review process this year, the Agency asked that the Subcommittee provide written commentary on each nomination that was reviewed during the evaluation process. This request applied especially to those nominations that were not deemed deserving of a Level I, II or III award. The purpose behind this request was to provide EPA authors with sufficient feedback so that they would understand why a given nomination was not successful in garnering an award. Furthermore, it was felt that receiving critical comments would help identify any possible weaknesses in papers that were submitted and would assist the authors in producing higher quality work in the future. Additionally, authors expect that this information would assist them in better preparing themselves for the next nomination cycle for the STAA program.

In general, nominations that were not recommended for an award this year did not have any logical flaws or other problems that eliminated them from competition; rather, the competition was strong with many excellent papers. Witness the large number of nominations (60 out of 135) selected for an award or honorable mention this year.

To assist those authors who would like to understand better why a given nomination was not recommended for an award by the Subcommittee this year, we suggest that the author evaluate their nomination (and component paper(s)) objectively, using the criteria used by the Subcommittee. In addition, it would be informative to review those papers that did receive awards this year, especially those receiving Level I or Level II awards.

The Subcommittee recognizes that researchers have a valid interest in receiving individual input regarding the quality of their specific papers; however, to do so is extremely time consuming and costly. Most of the specific criticisms of the papers are addressed verbally around a conference table. In order to provide thorough, written critiques, the Subcommittee would have to utilize the services of a rapporteur to capture the relevant commentaries on each paper. Therefore, for this annual cycle of the program (FY1996 Nominations), the Subcommittee has declined to provide this level of detail in its recommendations. The Subcommittee is willing to consider this request for next year.

### **3.3 STAA Program Administrative Recommendations**

The Subcommittee commends the staff of ORD for administering the STAA program. The staff has made significant improvements in the program and the nomination packages that have improved the program. The Subcommittee recommends that ORD management solicit participation of other Agency scientists and engineers as part of the Agency's goals to improve its scientific underpinnings and peer review of regulatory science. The following recommendations are directed to the ORD staff and managers that work with the STAA program, and to the authors of the nominations.

- a) This year, several nominations contained as many as six individual papers. The reviewers found this generally excessive and request that no more than three relevant papers (part of a set or series) be included as part of the nomination. Where appropriate, additional materials may be included, such as copies of previously published background work.
- b) Work that is nominated should be published within the past three years, although the work might actually have been completed within the past five years.

- c) Review articles (Category RA) should include a synthesis and an analysis, not just a summary of relevant literature.
- d) Although a paper should stand on its own merits, work should be published in journals that are relevant to the field of work. Publishing sound scientific work in an inappropriate or second-rate journal weakens the nomination. In addition, peer review of conference or workshop proceedings or chapters in books is often considered less rigorous than the peer review process used by first-rate journals.
- e) The suggested citations provided for many of the nominations need to reflect the value of the work to the Agency. In a number of cases, the title of the paper was given as the citation, indicating that no real thought was given to this matter.

The Subcommittee noted that nominating laboratories and program offices appear to have different screening procedures for selecting nominations for the STAA program. The Subcommittee encourages ORD to provide guidance to all EPA laboratories and program offices regarding the criteria for selecting nominees to the STAA program. The Subcommittee recommends that the STAA nomination form include information on the total number of peer-reviewed publications produced by the nominating organization during the nomination year and during the preceding two years. The total number of publications screened for submission to the STAA program should also be identified along with the total number submitted.

Finally, the Subcommittee again urges the Agency to publicize the names of the award winning scientists and engineers and their papers both within the Agency and outside the Agency in a variety of ways. For example, the Agency should announce these winners and make copies of their papers available through the Internet. The Agency should also develop press releases or letters from the Administrator that are targeted toward the journal that published the articles, professional society newsletters, and local newspapers in the vicinity of the scientist/engineer's research facility.

### **3.4 Award Recommendations**

The EPA authors recommended for awards include scientists and engineers from eleven EPA research laboratories, the Office of Radiation and Indoor Air, and the Office of Pollution Prevention and Toxics. Awards were recommended for seven of the eleven nomination categories, and for all categories for which nominations were submitted. A total of 53 nominations was recommended for awards. A summary of the distribution of award recommendations among categories is presented in Table II. There were original 141 nominations with over 200 individual papers submitted. The

**TABLE II - Summary of 1996 Award Recommendations**

Nomination Categories *	# Nom.	Award Levels				%	Hon. Men.
		I	II	III	Tot		
Control Systems & Technology	24	0	2	5	7	29%	1
Ecology, Ecosystem Risk Assessment & Protection	22	1	3	6	10	45%	5
Health Effects, Health Risk Assessment	26	1	4	5	10	38%	0
Monitoring & Measurement Methods	23	0	1	7	8	35%	0
Transport and Fate	15	1	5	3	9	60%	0
Review Articles	20	1	1	6	8	40%	1
Risk Management & Policy Formulation	5	0	0	1	1	20%	0
<b>TOTALS:</b>	<b>135</b>	<b>4</b>	<b>16</b>	<b>33</b>	<b>53</b>	<b>39%</b>	<b>7</b>

\* Categories listed in the "1996 Nomination Procedures and Guidelines," but for which nominations were not solicited are: Integrated Risk Assessment, Social Science Research, Environmental Education, and Environmental Trends for Drivers of Future Risk.

Subcommittee combined several individual nominations and re-categorized several others, reducing the final number of nominations to 135, of which 60 were recommended for an award or honorable mention. Re-categorized nominations are identified in Appendix A. The full list of award recommendations is contained in Appendix B. Eligible authors are noted in boldface in Appendix B. The percentage figure following their name reflects their individual level of effort on a given nomination as provided by EPA.

### **3.4.1 Level I Awards**

Four Level I awards were recommended to a total of nine scientists and engineers in EPA's research laboratories. Two awards were recommended to scientists and engineers in the National Exposure Research Laboratory in Athens, GA. One award was recommended to scientists and engineers in the National Health and Environmental Effects Research Laboratory in Research Triangle Park, NC. One award was recommended to scientists and engineers in the National Health and Environmental Effects Research Laboratory in Corvallis, OR. Please see pages B-1 and B-2 of Appendix B for details.

### **3.4.2 Level II Awards**

Sixteen Level II awards were recommended to a total of 27 scientists and engineers representing six EPA research laboratories, the Office of Radiation and Indoor Air, and the Office of Pollution Prevention and Toxics. Please see pages B-3 through B-8 of Appendix B for details.

### **3.4.3 Level III Awards**

Thirty-three Level III awards were recommended a total of 69 scientists and engineers representing 11 EPA research laboratories. Please see pages B-9 through B-23 of Appendix B for details.

### **3.4.4 Honorable Mention**

Seven nominations were judged as being worthy of an Honorable mention. These included 16 scientists and engineers from four EPA research laboratories. Please see pages B-24 through B-26 of Appendix B for details.

## Appendix A - Re-Categorized Nominations

Original Nomination Number(s)	New Category	Remarks
CS0108	Review Article (RA)	Review Paper
EC0087	Review Article (RA)	Review Paper
EC0126 EC0129	Combined into a single Nomination; no change in Category	Related
HE0041 HE0046	Combined into a single Nomination; no change in Category	Related
HE0043	Review Article (RA)	Review Paper
MM0036	Canceled	Duplicate to Nomination MM0079
MM0080 MM0081 MM0083	Combined into a single Nomination; no change in Category	Related
RA0124 RM0123	Combined into a single Nomination under Risk Management & Policy Formulation (RM)	Related

## Appendix B - Nominations Recommended for Awards

This Appendix identifies the 53 recommended Level I, II, and III awards and the seven nominations recommended for an Honorable Mention. This Appendix is divided into four parts. The first part (pages B-1 to B-2) provides information on the Level I award recommendations. The second part (pages B-3 to B-8) provides information on the Level II award recommendations. The third part (pages B-9 to B-23) provides information on the Level III award recommendations. The fourth part (pages B-24 to B-26) provides information on the Honorable Mention recommendations.

The first column (**Nom. #**) gives the nomination number as provided by EPA in the original submission. The second column (**Titles and Citations of Submitted Papers**) provides the full title and citation of all papers submitted as part of a given nomination. The third column (**Authors and Nominating Organization**) provides the name(s) of the EPA eligible authors (in boldface type) along with their level of effort (percentage) on the nomination. The primary nominating organization is also listed. Finally, ineligible authors (non-EPA) are also listed for completeness. The fourth column (**Recommended Award Level**) indicates which award is recommended (Level I, II, or III or Honorable Mention). The last column (**Suggested Citation from Nominating Organization**) reflects the language of the citation that was provided to the Subcommittee by the Agency. These are not Subcommittee citations.

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 **EPA AN SAB REPORT:  
RECOMMENDATIONS ON  
THE 1996 SCIENTIFIC AND  
TECHNOLOGICAL  
ACHIEVEMENT AWARD  
(STAA) NOMINATIONS**

**PREPARED BY THE SCIENTIFIC AND  
TECHNOLOGICAL ACHIEVEMENT  
AWARDS (STAA) SUBCOMMITTEE  
OF THE SCIENCE ADVISORY  
BOARD (SAB)**

**Appendix B -  
FY1996 Scientific and Technological Achievement Awards (STAA)  
Nominations Recommended for Awards**

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
<b>Nominations Recommended for a Level I Award (\$5,000) - Total of four</b>				
EC0121	<p>1. Potential environmental risks associated with the new sulfonylurea herbicides (Environmental Science and Technology, <b>27</b>(10):2250-2252, 1993)</p> <p>2. Chlorsulfuron influence on garden pea reproduction (Physiologia Plantarum, <b>94</b>:261-267, 1995)</p> <p>3. Potential impact of low levels of chlorsulfuron and other herbicides on growth and yield of nontarget plants (Environ. Tox. Chem., <b>15</b>(7):1189-1196, 1996)</p>	<p><b>Dr. John S. Fletcher (30%)</b>  <b>Mr. Thomas G. Pfeleger (30%)</b>  <b>Mr. Hilman C. Ratsch (30%)</b>  <b>Mr. Robert Hayes (10%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Corvallis, OR</p>	LEVEL I	For research on potential environmental risks associated with sulfonylurea herbicides.
HE0131	<p>1. Developmental effects of an environmental antiandrogen: The fungicide Vinclozolin alters sex differentiation of the male rat (Toxicology &amp; Applied Pharmacology, <b>129</b>:46-52, 1994)</p> <p>2. Environmental hormone disruptors: Evidence that Vinclozolin developmental toxicity is mediated by antiandrogenic metabolites (Toxicology &amp; Applied Pharmacology, <b>126</b>:275-285, 1994)</p> <p>3. Persistent DDT metabolite p,p'-DDE is a potent androgen receptor antagonist (Nature, 375:581-585, 1995)</p>	<p><b>Dr. L. Earl Gray, Jr. (25%)</b>  <b>Mr. Joseph S. Ostby (25%)</b>  <b>Dr. Susan Laws (5%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC</p> <p>(Ineligible authors: Dr. William Kelce, Ms. Christy (Stone) Lambright, Dr. E. Monosson, Dr. M. Gamcsik, Dr. J. Kempainen and Dr. E. Wilson)</p>	LEVEL I	Molecular mechanisms of antiandrogen-induced alterations of mammalian reproductive development.

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
TF0089	Iron mediated reductive transformations: Investigation of reaction mechanism (Environmental Science and Technology, <b>30</b> (2):716-719, 1996	<b>Dr. Eric J. Weber (100%)</b> National Exposure Research Laboratory, Athens, GA	LEVEL I	For clarifying the reaction mechanism of iron-mediated reductive transformations.
RA0114	Life after death: Lignin-humic relationships reexamined (Critical Reviews in Environmental Science and Technology, <b>26</b> (2):95-153, 1966)	<b>Dr. George W. Bailey (30%)</b> National Exposure Research Laboratory, Athens, GA  (Ineligible author: Dr. Sergey M. Shevchenko)	LEVEL I	Review on the genesis, structure, reactivity and environmental significance of lignins and humics.

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
<b>Nominations Recommended for a Level II Award (\$2,500) - Total of sixteen</b>				
CS0099	Simulation of performance of chlorine-free fluorinated ethers and fluorinated hydrocarbons to replace CFC-11 and CFC-114 in chillers (ASHRAE Transactions 1993, vol 99, part 1, p. 397-407, 1993)	<b>Dr. Jane C. Bare (100%)</b> National Risk Management Research Laboratory, Cincinnati, OH	LEVEL II	Simulation of performance of chlorine-free fluorinated ethers and hydrocarbons to replace CFC-11 and CFC-114 in chillers.
CS0111	Sorbent capture of nickel, lead, and cadmium in a laboratory swirl flame incinerator (Combustion and Flame, 100:241-250, 1995)	<b>Dr. William P. Linak (40%)</b> National Risk Management Research Laboratory, Research Triangle Park, NC  (Ineligible authors: Mr. Ravi K. Srivastava and Dr. Jost O.L. Wendt)	LEVEL II	For the research article - Sorbent capture of nickel, lead and cadmium in a laboratory swirl flame incinerator.
EC0035	1. Episodic acidification of small streams in the northeastern United States: Episodic response project (Ecol. Applications, 6(2):374-388, 1996) 2. Episodic acidification of small streams in the northeastern United States: Ionic controls of episodes (Ecol. Applications, 6(2):389-407, 1996) 3. Episodic acidification of small streams in the northeastern United States: Fish mortality in field bioassays (Ecol. Applications, 6(2):408-421, 1996) 4. Episodic acidification of small streams in the northeastern United States: Effects on fish populations (Ecol. Applications, 6(2):422-437, 1996)	<b>Dr. P. James Wigington, Jr. (50%)</b> <b>Dr. Joan P. Baker (20%)</b>  National Health and Environmental Effects Research Laboratory, Corvallis, OR  (Ineligible authors: Dr. John Van Sickle, Dr. David R. DeWalle, Mr. W.A. Kretser, W.R. Barchet, D.V. Peck, M.K. McDowell, H.A. Simonin, D.W. Bath, B.P. Baldigo, R.F. Carline, C.J. Gagen, W.E. Sharpe and P.S. Murdoch)	LEVEL II	For the conduct of exceptionally high quality research and publication of results from the Episodic Response Project.

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
EC0128	Nutrient availability alters below-ground respiration of ozone-exposed ponderosa pine (Tree Physiol., in press, 1996)	<b>Dr. Christian P. Andersen (50%)</b> National Health and Environmental Effects Research Laboratory, Corvallis, OR  (Ineligible author: Dr. Carolyn F. Scagel)	LEVEL II	Nutrient availability alters below-ground respiration of ozone-exposed ponderosa pine.
EC0138	Ecoregions: A spatial framework for environmental management (In: Biological Assessment and Criteria: Tools for Water Resource Planning and Decision Making. W.S. Davis and T.P. Simon (eds.), Lewis Publ., Boca Raton, FL 1995)	<b>Mr. James M. Omernik (100%)</b> National Health and Environmental Effects Research Laboratory, Corvallis, OR	LEVEL II	For significant contributions to scientific research and environmental protection: development of the ecoregion approach.
HE0006	1. Development of structure-activity relationship rules for predicting carcinogenic potential of chemicals (Toxicology Letters, 79:219-228, 1995) 2. Cancer risk reduction through mechanism-based molecular design of chemicals (ACS Symposium Series, 640:62-73, 1996) 3. Carcinogenic potential of organic peroxides: Prediction based on structure-activity relationships (SAR) and mechanism-based short-term tests (Environ. Carcinog. & Ecotox. Revs., C14(1):63-80, 1966)	<b>Dr. Yin-tak Woo (35%)</b> <b>Dr. David Y. Lai (35%)</b> <b>Dr. Mary F. Argus (15%)</b> <b>Dr. Joseph C. Arcos (15%)</b> Office of Pollution Prevention and Toxics, Washington, DC	LEVEL II	For the development of mechanism-based structure-activity relationships analysis for cancer predictive expert system.
HE0009	An analysis of the uncertainties in estimates of radon-induced lung cancer (Risk Analysis, 12(2):277-285, 1992)	<b>Dr. Jerome S. Puskin (100%)</b> Office of Radiation and Indoor Air, Washington, DC	LEVEL II	In recognition of outstanding achievement in assessing the uncertainties in estimating the risk from exposure to indoor radon.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
HE0039	National and regional distributions of airborne radon concentrations in U.S. homes (Health Physics, <b>66</b> (6):699-706, 1994)	<b>Mr. Frank Marcinowski (35%)</b> Office of Radiation and Indoor Air, Washington, DC  (Ineligible authors: Mr. Robert M. Lucas and Mr. William M. Yeager)	LEVEL II	For identifying the magnitude of the residential radon problem and furthering the Agency's mission of environmental risk reduction.
HE0042	1. Oxidant generation and lung injury after particulate air pollutant exposure increase with the concentrations of associated metals (Inhalation Toxicology, <b>8</b> :457-477, 1966) 2. Humic-like substances in air pollution particulates correlate with concentrations of transition metals and oxidant generation (Inhalation Toxicology, <b>8</b> :479-494, 1966)	<b>Dr. Andrew J. Ghio (25%)</b> <b>Dr. Daniel L. Costa (15%)</b> <b>Dr. Kevin L. Dreher (10%)</b> <b>Mr. James R. Lehmann (5%)</b> <b>Mr. Darrell W. Winsett (5%)</b>  National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC  (Ineligible authors: Dr. Robert J. Pritchard, Dr. Jeffrey S. Tepper, Dr. Matthew Ian Gilmour, Ms. Jacqueline Stone huerner, Dr. Claude A. Piantadosi, Mr. David R. Quigley and Ms. Pat Park)	LEVEL II	<i>(EPA did not suggest a citation)</i>

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
MM0080 MM0081 MM0083	<p>Vacuum distillation coupled with gas chromatography/mass spectrometry for the analysis of environmental samples (Anal. Chem. <b>67</b>(22):4044-4052, 1995)</p> <p>Volatile organic compound determinations using surrogate-based correction for method and matrix effects (Anal. Chem. <b>67</b>(2):426-433, 1995)</p> <p>Separation and isolation of volatile organic compounds using vacuum distillation with GC/MS determination (Anal. Chem. <b>66</b>(6):905-908, 1994)</p>	<p><b>Mr. Michael Hiatt (100%)</b> National Exposure Research Laboratory, Las Vegas, NV</p> <p><b>Mr. Michael Hiatt (85%)</b> <b>Ms. Carol M. Farr (15%)</b> National Exposure Research Laboratory, Las Vegas, NV</p> <p><b>Mr. Michael Hiatt (60%)</b> National Exposure Research Laboratory, Las Vegas, NV (Ineligible authors: Mr. David R. Youngman and Dr. Joseph R. Donnelly)</p>	LEVEL II	<p>For development of vacuum distillation for the analysis of environmental samples.</p> <p>(Note: During the review and evaluation process, the review committee combined nominations MM0080, MM0081 and MM0083 into a single nomination with a recommended award level of II.)</p>
TF0073	Effect of temperature and pore size on the hydraulic properties and flow of a hydrocarbon oil in the subsurface (J. Contaminant Hydrology, <b>16</b> :55-86, 1994)	<b>Eva L. Davis (100%)</b> National Risk Management Research Laboratory, Cincinnati, OH	LEVEL II	Effect of temperature and pore size on the hydraulic properties and flow of a hydrocarbon oil in the subsurface.
TF0074	A screening model for nonaqueous phase liquid transport in the vadose zone using Green-Ampt and kinematic wave theory (Water Resources Research, <b>30</b> (1):93-105, 1994)	<b>James W. Weaver (60%)</b> <b>Bob K. Lien (20%)</b> National Risk Management Research Laboratory, Cincinnati, OH (Ineligible author: Randall J. Charbeneau)	LEVEL II	A screening model for nonaqueous phase liquid transport in the vadose zone using green-ampt and kinematic wave theory.

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
TF0090	Chemical- and sediment-mediated reduction of the Azo Dye Disperse Blue 79 (Environmental Science and Technology, <b>29</b> (5):1163-1170, 1995)	<b>Dr. Eric J. Weber (85%)</b> National Exposure Research Laboratory, Athens, GA  (Ineligible author: Ms. Rebecca L. Adams)	LEVEL II	For identification of the reaction pathways and products of disperse blue 79 in anoxic sediments.
TF0107	Bioremediation of an experimental oil spill on the shoreline of Delaware Bay (Environmental Science and Technology, <b>30</b> (5):1764-1775, 1996)	<b>Dr. Albert D. Venosa (75%)</b> <b>Dr. John R. Haines (3%)</b> National Risk Management Research Laboratory, Cincinnati, OH  (Ineligible authors: Dr. Makram T. Suidan, Dr. Brian A. Wrenn, Mr. Kevin L. Strohmeier, Mr. B. Loye Eberhart, Dr. Dennis King and Ms. Edith Holder)	LEVEL II	Bioremediation of an experimental oil spill on the shoreline of Delaware Bay.
TF0110	Reassessment of biogenic volatile organic compound emissions in the Atlantic area (Atmospheric Environment, <b>29</b> (13):1569-1578, 1995)	<b>Mr. Christopher D. Geron (90%)</b> National Risk Management Research Laboratory, Research Triangle Park, NC  (Ineligible authors: Thomas E. Pierce and Alex B. Guenther)	LEVEL II	For reassessment of biogenic volatile organic emissions in Atlanta.

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
RA0062	<p>1. Wood production under changing climate and land use (In: Climate Change 1995, Cambridge University Press, Chap. 15, pp 487-510, 1996)</p> <p>2. Potential responses of global forest growing stocks to changing climate, land use and wood consumption (Commonwealth Forestry Review, <b>75</b>(1):65-75, 1996)</p>	<p><b>Dr. Allen M. Solomon (50%)</b>  National Health and Environmental Effects Research Laboratory, Corvallis, OR</p> <p>(Ineligible authors: Dr. N.H. Ravindranath, Dr. Robert B. Stewart, Dr. Michael Weber and Dr. Sten Nilsson)</p>	LEVEL II	To recognize the importance to international environmental decision-making of the review paper "Wood production under changing climate and land use."

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
<b>Nominations Recommended for a Level III Award (\$1,000) - Total of thirty three</b>				
CS0002	Sorption, diffusion and permeation of 1,1,1-trichloroethane through adsorbent-filled polymeric membranes (J. Membr. Sci., <b>103</b> :243-255, 1995)	<b>Dr. Subhas K. Sikdar (45%)</b> National Risk Management Research Laboratory, Cincinnati, OH  (Ineligible authors: Dr. Wenchang Ji and Dr. Sun-tak Hwang)	LEVEL III	Sorption, diffusion and permeation of 1,1,1-trichloroethane through adsorbent-filled polymeric membranes.
CS0003	Modeling distribution system water quality: Regulatory implications (J. Water Resources Planning & Mgmt., <b>121</b> (6):423-428, 1995)	<b>Dr. Robert M. Clark (50%)</b> <b>Dr. Lewis A. Rossman (25%)</b> National Risk Management Research Laboratory, Cincinnati, OH  (Ineligible author: Mr. Larry J. Wymer)	LEVEL III	In recognition of the authors outstanding research in developing an understanding of the factors that influence water quality in distribution systems.
CS0076	Lignin-degrading fungi as degraders of pentachlorophenol and creosote in soil (In: Bioremediation: Science and Applications, ed. H.D. Skipper and R. Turco, Soil Science Special Publication No. 43, Soil Science Society of America, Madison, WI, p. 117-133, 1995)	<b>Dr. John A. Glaser (90%)</b> National Risk Management Research Laboratory, Cincinnati, OH  (Ineligible author: Dr. Richard T. Lamar)	LEVEL III	Remediation technology using lignin-degrading fungi to treat wood-preserving chemicals is shown to be a near term accomplishment.
CS0105	Re-entrainment and dispersion of exhausts from indoor radon reduction systems: Analysis of tracer gas data (Indoor Air, <b>5</b> :270-284, 1995)	<b>Mr. D. Bruce Henschel (100%)</b> National Risk Management Research Laboratory, Research Triangle Park, NC	LEVEL III	Re-entrainment and dispersion of exhausts from indoor radon reduction systems: analysis of tracer gas data.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
CS0112	Emissions of trace products of incomplete combustion from a pilot-scale incinerator secondary combustion chamber (J. Air and Waste Mgmt Assoc., 46:309-316, 1996)	<b>Dr. Paul M. Lemieux (50%)</b> <b>Mr. Jeffrey V. Ryan (30%)</b> National Risk Management Research Laboratory, Research Triangle Park, NC  (Ineligible authors: Charles Bass and Dr. Robert Barat)	LEVEL III	For the article - Emissions of trace products of incomplete combustion from a pilot-scale incinerator secondary combustion chamber.
EC0063	An approach for characterizing trophospheric ozone risk to forests (Environmental Management, 201:1-20, 1996)	<b>Dr. W.E. Hogsett (60%)</b> <b>Dr. James Weber (10%)</b> <b>Dr. David T. Tingey (5%)</b>  National Health and Environmental Effects Research Laboratory, Corvallis, OR  (Ineligible authors: Mr. Andrew Herstrom, Dr. Henry Lee and Mr. John A. Laurence)	LEVEL III	An approach for characterizing trophospheric ozone risk to forests.
EC0064	Effects of elevated CO <sub>2</sub> and nitrogen on ponderosa pine fine roots and associated fungal components (Journal of Biogeography, 22:281-287, 1996)	<b>Dr. David T. Tingey (35%)</b> <b>Dr. Donald L. Phillips (20%)</b>  National Health and Environmental Effects Research Laboratory, Corvallis, OR  (Ineligible authors: Dr. Mark G. Johnson and Ms. Majorie J. Storm)	LEVEL III	The nominees have adapted the new technique of minirhizotrons to establish that the mycorrhizal and fungal hyphal components of the rhizosphere are more responsive to elevated CO <sub>2</sub> than the plant fine roots.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
EC0065	<p>1. Automated approaches for regional runoff mapping in the northeastern United States (<i>J. Hydrol.</i>, <b>138</b>:361-383, 1992)</p> <p>2. Mapping long-term regional runoff in the eastern United States using automated approaches (<i>J. Hydrol.</i>, <b>169</b>:189-207, 1995)</p> <p>3. Maps of regional evapotranspiration and runoff/precipitation ratios in the northeast United States (<i>J. Hydrol.</i>, <b>168</b>:283-298, 1995)</p>	<p><b>Dr. Marshall Robbins Church (50%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Corvallis, OR</p> <p>(Ineligible authors: Mr. Gary D. Bishop and Dr. David Cassell)</p>	LEVEL III	For outstanding contributions in developing approaches for mapping regional runoff in the northeastern United States.
EC0085	Photochemical production of dissolved inorganic carbon from terrestrial organic matter: Significance to the oceanic organic carbon cycle ( <i>Geophysical Research Letters</i> , <b>22</b> (4):417-420, 1995)	<p><b>Dr. Richard G. Zepp (50%)</b></p> <p>National Exposure Research Laboratory, Athens, GA</p> <p>(Ineligible author: Dr. William L. Miller)</p>	LEVEL III	Photochemical production of DIC from terrestrial organic matter: Significance to the oceanic organic carbon cycle.
EC0092	Direct carbon monoxide photoproduction from plant matter ( <i>J. Geophysical research</i> , <b>100</b> (D6):11403-11413, 1995)	<p><b>Dr. Richard G. Zepp (34%)</b></p> <p>National Exposure Research Laboratory, Athens, GA</p> <p>(Ineligible authors: Dr. Matthew A. Tarr and Dr. William L. Miller)</p>	LEVEL III	Direct carbon monoxide photoproduction from plant matter.

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
EC0126 EC0129	<p>ΣPAH: A model to predict the toxicity of polynuclear aromatic hydrocarbon mixtures in field-collected sediments (Environ. Tox. Chem., 14(11):1977-1987, 1995)</p>	<p><b>Dr. Richard C. Swartz (30%)</b>  <b>Mr. Donald W. Schults (10%)</b>  <b>Dr. Robert J. Ozretich (10%)</b>  <b>Ms. Janet O. Lamberson (10%)</b>  <b>Ms. Faith A. Cole (10%)</b>  <b>Dr. Steven P. Ferraro (10%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Corvallis, OR</p> <p>(Ineligible authors: Dr. Theodore H. DeWitt and Ms. Michele S. Redmond)</p>	LEVEL III	For the development of and field-verification of the ΣPAH model to predict sediment toxicity caused by PAH mixtures, and for a comparative risk assessment of sediment contaminants in the Lauritzen Channel, CA.
	<p>Sediment toxicity, contamination and amphipod abundance at a DDT- and dieldrin-contaminated site in San Francisco Bay (Environ. Tox. Chem., 13(6):949-962, 1994)</p>	<p><b>Dr. Richard C. Swartz (30%)</b>  <b>Ms. Faith A. Cole (10%)</b>  <b>Ms. Janet O. Lamberson (10%)</b>  <b>Dr. Steven P. Ferraro (10%)</b>  <b>Mr. Donald W. Schults (10%)</b>  <b>Mr. Waldemar A. DeBen (10%)</b>  <b>Dr. Henry Lee, II (10%)</b>  <b>Dr. Robert J. Ozretich (10%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Corvallis, OR</p>		<p>(Note: During the review and evaluation process, the review committee combined nominations EC0126 and EC0129 into a single nomination with a recommended award level of III.)</p>

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
HE0016	<p>1. Increased [<sup>3</sup>H]phorbol ester binding in rat cerebellar granule cells by polychlorinated biphenyl mixtures and congeners: Structure-activity relationships (Toxicology and Applied Pharmacology, <b>130</b>:140-148, 1995)</p> <p>2. Increased [<sup>3</sup>H]phorbol ester binding in rat cerebellar granule cells and inhibition of <sup>45</sup>Ca<sup>2+</sup> sequestration in rat cerebellum by polychlorinated diphenyl ether congeners and analogs: Structure-activity relationships (Toxicology and Applied Pharmacology, <b>138</b>:251-261, 1996)</p>	<p><b>Dr. Prasada Rao S. Kodavanti (30%)</b>  <b>Mr. Thomas R. Ward (30%)</b>  <b>Dr. James D. McKinney (15%)</b>  <b>Dr. Hugh A. Tilson (15%)</b>  <b>Dr. Chris L. Waller (10%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC</p>	LEVEL III	For research on structure activity modeling of neurotoxic polychlorinated biphenyls.
HE0021	<p>1. Mechanistic linkage between DNA adducts, mutations in oncogenes and tumorigenesis of carcinogenic environmental polycyclic aromatic hydrocarbons in strain A/J mice (Toxicology, <b>105</b>:403-413, 1995)</p> <p>2. Adenomas induced by polycyclic aromatic hydrocarbons in strain A/J mouse lung correlate with time-integrated DNA adduct levels (Cancer Research, <b>55</b>:1039-1044, 1995)</p>	<p><b>Dr. Stephen Nesnow (30%)</b>  <b>Dr. Marc J. Mass (30%)</b>  <b>Dr. Jeffrey A. Ross (30%)</b>  <b>Dr. James R. Rabinowitz (5%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC</p> <p>(Ineligible authors: Mr. Garret B. Nelson, Ms. Katrina Wilson, Mr. Anthony J. Galati and Dr. Gary D. Stoner)</p>	LEVEL III	For scientific advances in cancer risk assessment of environmental polycyclic aromatic hydrocarbons.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
HE0027	<p>1. Effects of developmental hypothyroidism on auditory and motor function in the rat (Toxicology &amp; Applied Pharmacology, <b>135</b>:67-76, 1995)</p> <p>2. Developmental exposure to polychlorinated biphenyls (Aroclor 1254) reduces circulating thyroid hormone concentrations and causes hearing deficits in rats (Toxicology &amp; Applied Pharmacology, <b>135</b>:77-88, 1995)</p> <p>3. Developmental exposure to Aroclor 1254 produces low frequency alterations in adult rat brainstem auditory evoked responses (Fundamental &amp; Applied Toxicology, <b>33</b>:120-128, 1996)</p>	<p><b>Dr. Ellen S. Goldey (35%)</b>  <b>Dr. Kevin M. Crofton (30%)</b>  <b>Dr. Christopher Lau (10%)</b>  <b>Dr. David W. Herr (15%)</b>  <b>Ms. Laura S. Kehn (5%)</b>  <b>Ms. Georgia L. Rehnberg (5%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC</p>	LEVEL III	For research on the developmental neurotoxicity of polychlorinated biphenyls.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
HE0041 HE0046	<p>1. Comparative <i>in vitro</i> methylation of trivalent and pentavalent arsenicals (Toxicology &amp; Applied Pharmacology, <b>135</b>:172-178, 1995)</p> <p>2. Mono- and dimethylation of arsenic in rat liver cytosol <i>in vitro</i> (Chemico-Biological Interactions, <b>99</b>:147-164, 1996)</p>	<p><b>Dr. David J. Thomas (30%)</b> National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC</p> <p>(Ineligible authors: Dr. M. Styblo, Dr. M. Delnomdedieu and Dr. H. Yamauchi)</p>	LEVEL III	<p>In recognition of research on the metabolism and fate of arsenic in biological systems, and of research on the analysis of arsenic in biological matrices.</p>
	<p>1. Liberation and analysis of protein-bound arsenicals (Journal of Chromatography B, <b>677</b>:161-166, 1996)</p> <p>2. Identification of methylated metabolites of inorganic arsenic by thin-layer chromatography (Journal of Chromatography B, <b>668</b>:21-29, 1995)</p>	<p><b>Dr. David J. Thomas (25%)</b> <b>Dr. Michael F. Hughes (25%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC</p> <p>(Ineligible authors: Dr. M. Styblo and Dr. M. Delnomdedieu)</p>		<p>(Note: During the review and evaluation process, the review committee combined nominations HE0041 and HE0046 into a single nomination with a recommended award level of III.)</p>

\* NOTE: The percentages given after each name represent the percent of the total level of effort as documented in the EPA nomination.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
HE0132	<p>1. Zinc deficiency causes apoptosis but not cell cycle alterations in organogenesis-stage rat embryos: Effect of varying duration of deficiency (Teratology, <b>52</b>(3):149-159, 1995)</p> <p>2. Primary and secondary zinc deficiency as factors contributing to abnormal central nervous system development (Dev. Brain Dysfunct., <b>8</b>:79-89, 1995)</p> <p>3. Tumor necrosis factor-<math>\alpha</math> alters maternal and embryonic zinc metabolism and is developmentally toxic in mice (Journal of Nutrition, <b>125</b>:908-919, 1995)</p> <p>4. Altered maternal Zinc metabolism following exposure to diverse developmental toxicants (Reproductive Toxicology, <b>8</b>(1):25-40, 1994)</p> <p>5. Altered Zn status by <math>\alpha</math>-Hederin in the pregnant rat and its relationship to adverse developmental outcome (Reproductive Toxicology, <b>8</b>(1):15-24, 1994)</p> <p>6. The role of metallothionein induction and altered Zinc status in maternally mediated developmental toxicity: Comparison of the effects of urethane and styrene in rats (Tox. &amp; Applied Pharmacology, <b>110</b>(3):450-463, 1991)</p>	<p><b>Dr. John M. Rogers (40%)</b>  <b>Dr. Robert M. Zucker (5%)</b>  <b>Mr. Kenneth H. Elstein (5%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC</p> <p>(Ineligible authors: Dr. Carl L. Keen, Dr. Marie W. Taubeneck, Dr. George P. Daston, Dr. Kathleen Sulik, Dr. M. Eric Gershwin, Dr. Lois D. Lehmann-McKeeman, Mr. Gary J. Overmann, Mr. Donald Baines, Mr. Aftab Ansari and Ms. Margaret A. Jankowski)</p>	LEVEL III	For research on the role of toxicant-induced zinc deficiency in the developmental toxicity of diverse agents.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
MM0031	<p>1. Conditional simulation: Practical application for sampling design optimization (Presented at the Geostatistical Congress in Troia, Portugal in 1992 and published in the conference proceedings: Geostatistics Troia '92, by Kluwer Academic Press)</p> <p>2. Phased sampling for soil remediation (Environmental and Ecological Statistics, 1:247-263, 1994)</p>	<p><b>Dr. Evan J. Englund (70%)</b> National Exposure Research Laboratory, Las Vegas, NV  (Non-eligible author: Dr. Naser Heravi)</p>	LEVEL III	For scientific achievement in sampling design optimization demonstrated in publications.
MM0033	Identification of bromohydrins in ozonated waters (Applied Spectroscopy, 48(10):1181-1192, 1994)	<p><b>Dr. Timothy W. Collette (50%)</b> <b>Dr. Susan D. Richardson (35%)</b> <b>Mr. Alfred D. Thruston, Jr. (15%)</b>  National Exposure Research Laboratory, Athens, GA</p>	LEVEL III	For excellence in the use of multispectral analysis techniques for use in identification of bromohydrins in ozonated waters.
MM0037	Concentrations and phase distributions of nitrated and oxygenated polycyclic aromatic hydrocarbons in ambient air (Atmospheric Environment, 29(19):2575-2584, 1995)	<p><b>Dr. Nancy K. Wilson (50%)</b> <b>Dr. Thomas R. McCurdy (30%)</b>  National Exposure Research Laboratory, Research Triangle Park, NC  (Non-eligible author: Ms. Jane C. Chuang)</p>	LEVEL III	For enhancing knowledge and characterization of nitrated and oxygenated polycyclic aromatic hydrocarbons in air.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
MM0038	<p>1. Arsenic determination in saline waters utilizing a tubular membrane as a gas-liquid separator for hydride generation inductively coupled plasma mass spectrometry (Journal of Analytical Atomic Spectrometry, <b>11</b>:505-509, July 1996)</p> <p>2. Speciation of arsenic compounds by ion chromatography with inductively coupled plasma mass spectrometry detection utilizing hydride generation with a membrane separator (Journal of Analytical Atomic Spectrometry, <b>11</b>: 6 pp, September 1996)</p>	<p><b>Dr. John T. Creed (30%)</b>  <b>Dr. Isabel C. Chamberlain (20%)</b>  <b>Ms. Carol Brockhoff (20%)</b>  National Exposure Research Laboratory, Research Triangle Park, NC</p> <p>(Non-eligible authors: Dr. Matthew Magnuson and Manohari Sivaganesan)</p>	LEVEL III	For arsenic determination and speciation utilizing ion chromatography coupled with a gas permeable membrane separator and ICP-MS detection.
MM0075	Measurement of hydrocarbon-degrading microbial populations by a 96-well plate most-probable-number procedure (Journal of Industrial Microbiology, <b>16</b> :36-41, 1996)	<p><b>Dr. John R. Haines (40%)</b>  <b>Dr. Albert D. Venosa (10%)</b>  National Risk Management Research Laboratory, Cincinnati, OH</p> <p>(Non-eligible authors: Dr. Brian A. Wrenn, Ms. Edith Holder, R.T. Herrington and Mr. Kevin Strohmeier)</p>	LEVEL III	For measurement of hydrocarbon-degrading microbial populations using a 96-well plate MPN procedure.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
MM0079	<p>1. Breath measurements as volatile organic compound biomarkers (Environmental Health Perspectives, <b>46</b>:in press, 1996)</p> <p>2. A linear model relating breath concentrations to environmental exposures: Application to a chamber study of four volunteers exposed to volatile organic chemicals (J. Exposure Analysis and Environmental Epidemiology, <b>3</b>(1):75-102, 1993)</p> <p>3. The Los Angeles TEAM study: Personal exposure, indoor-outdoor air concentrations, and breath concentrations of 25 volatile organic compounds (J. Exposure Analysis and Environmental Epidemiology, <b>1</b>(2):37-72, 1991)</p>	<p><b>Dr. Lance A. Wallace (55%)</b>  <b>Dr. Timothy J. Buckley (10%)</b>  <b>Dr. William C. Nelson (10%)</b></p> <p>Atmospheric Research and Exposure Assessment Laboratory, Reston, VA</p> <p>(Non-eligible authors: Dr. Edo Pellizari, Dr. Sydney Gordon and Dr. Robert Ziefenhus)</p>	LEVEL III	For continuously improving breath sampling methods and employing them in field and chamber studies as a means of better understanding human exposure to VOCs.
MM0084	<p>1. Regional scale trend monitoring of indicators of trophic conditions of lakes (Water Resources Bulletin, <b>31</b>(1):117-140, February 1995)</p> <p>2. The role of sample surveys for monitoring the condition of the nation's lakes (Environmental Monitoring and Assessment, <b>32</b>:101-134, 1994)</p> <p>3. Environmental monitoring and assessment program, EMAP-surface waters: A northwest lakes pilot (Lake and Reservoir Management, <b>7</b>(1):1-11, 1991)</p>	<p><b>Dr. David P. Larsen (50%)</b>  <b>Dr. Steven G. Paulsen (10%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Corvallis, OR</p> <p>(Ineligible authors: Dr. N. Scott Urquhart, Mr. David L. Kugler, Don Stevens, Anthony Selle, and Dr. Kent W. Thornton)</p>	LEVEL III	For outstanding accomplishment in the development of new approaches for monitoring our natural resources.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
TF0086	Integrated assessment of reduced emission impacts from a biomedical waster incinerator: Atmospheric characterization and modeling applications on particulate matter and acid gases (Environmental Science and Technology, <b>30</b> (5):1680-1686, 1996)	<p><b>Dr. Shaibal Mukerjee (50%)</b>  <b>Mr. Thomas A. Lumpkin (10%)</b>  <b>Mr. Robert K. Stevens (10%)</b>  National Exposure Research Laboratory, Research Triangle Park, NC</p> <p>(Ineligible authors: Mr. Matthew C. Somerville, Dr. Robert D. Willis, Mr. Robert B. Kellogg, Mr. David C. Stiles, Dr. Donald L. Fox and Dr. Carl M. Shy)</p>	LEVEL III	For significant advancement in integrated source apportionment techniques to assess emission reduction strategies.
TF0093	Enantiomeric selectivity in the environmental degradation of dichlorprop as determined by high-performance capillary electrophoresis (Environmental Science and Technology, <b>30</b> (8):2449-2455, 1996)	<p><b>Dr. Arthur W. Garrison (50%)</b>  National Exposure Research Laboratory, Athens, GA</p> <p>(Ineligible authors: Dr. Philippe Schmitt, Dr. Dieter Martens and Dr. Antonius Kettrup)</p>	LEVEL III	For demonstration of enantioselectivity in the environmental degradation of dichlorprop using capillary electrophoresis.
TF0109	Gas-phase mass transfer model for predicting volatile organic compound (VOC) emission rates from indoor pollutant sources (Indoor Air, <b>6</b> :31-40, 1996)	<p><b>Dr. Leslie E. Sparks (50%)</b>  <b>Dr. Bruce A. Tichenor (20%)</b>  <b>Dr. John C.S. Chang (20%)</b>  National Risk Management Research Laboratory, Research Triangle Park, NC</p> <p>(Ineligible author: Dr. Zhishi Guo)</p>	LEVEL III	For gas-phase mass transfer model for predicting volatile organic compound emission rates from indoor pollutant sources.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization ( <i>SAB Comments in paren.</i> )
RA0013	Use of freshwater plants for phytotoxicity testing: A review (Environmental Pollution, <b>87</b> :319-336, 1995)	<b>Dr. Michael A. Lewis (100%)</b> National Health and Environmental Effects Research Laboratory, Gulf Breeze, FL	LEVEL III	For a scientific review which supports toxicity testing of plants for balanced environmental hazard assessments.
RA0053	Physiological and biochemical mechanisms that regulate the accumulation and toxicity of environmental chemicals in fish (In: Bioavailability: Physical, Chemical, and Biological Interactions, Session 6, Chapter 2. J.L. Hamelink, P.F. Landrum, H.L. Bergman, W.H. Benson, Editors, Lewis Publishers, Boca Raton, FL, pp 179-203, 1994)	<b>Dr. James M. McKim (100%)</b> National Health and Environmental Effects Research Laboratory, Duluth, MN	LEVEL III	A review of biological mechanisms in fish that regulate the accumulation of environmental chemicals.
RA0101	Role and significance of scale to ecotoxicology (In: Ecological Toxicity Testing: Scale, Complexity, and Relevance, J. Cairns, Jr. and B.R. Niederlehner (eds.), Chapter 4, pp 49-72, Lewis Publishers, FL, 1995)	<b>Dr. Kenneth T. Perez (100%)</b> National Health and Environmental Effects Research Laboratory, Narragansett, RI	LEVEL III	Role and significance of scale to ecotoxicology.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
RA0115	<p>1. Indoor particles: A review (J. Air &amp; Waste Mgmt Assoc., 46:98-126, 1996)</p> <p>2. VOCs and the environment and public health - exposure (In: Chemistry and Analysis of Volatile Organic Compounds in the Environment, Blomen, H.J. and J. Burn (eds.), Blackie Academic &amp; Professional, Glasgow, Scotland, 1993)</p> <p>3. Exposure assessment from field studies (In: Environmental Carcinogens - Methods of Analysis and Exposure Measurement, Volume 12: Indoor Air, Seifert, B., H.J. van de Wiel, B. Dodet and I.K. O'Neill (eds.), IARC, Lyon, France 1993)</p>	<p><b>Dr. Lance A. Wallace (100%)</b>            Atmospheric Research and Exposure Assessment Laboratory, Reston, VA</p>	LEVEL III	For contributing to scientific knowledge of human exposure to volatile organic compounds and particles by means of comprehensive review articles.
RA0116	Effects of increased solar ultraviolet radiation on biogeochemical cycles (Ambio, 24(3):181-187, 1995)	<p><b>Dr. Richard G. Zepp (50%)</b>            National Exposure Research Laboratory, Athens, GA</p> <p>(Ineligible authors: Dr. Terry Callaghan and Dr. David Erickson)</p>	LEVEL III	Effects of increased solar ultraviolet radiation on biogeochemical cycles.
RA0117	DNA Modifications - Investigations by mass spectrometry (In: Mass Spectrometry: Clinical and Biomedical Applications, Vol. 2, D.M. Desiderio (ed.), Plenum Press, New York 1994)	<p><b>Dr. Curt Norwood (96%)</b>            National Health and Environmental Effects Research Laboratory, Narragansett, RI</p> <p>(Ineligible author: Prof. Paul Vouros)</p>	LEVEL III	For excellence in DNA-adduct research.

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
RA0124 RM0123	<p>1. Ecological risk assessment (Fisheries, <b>19</b>(9):14-18, 1994)</p> <p>2. The future of ecological risk assessment (Human &amp; Ecol. Risk Assess., <b>1</b>(4):339-343, 1995)</p>	<p><b>Dr. Robert T. Lackey (100%)</b></p> <p>National Health and Environmental Effects Research Laboratory, Corvallis, OR</p>	LEVEL III	<p>For scientific and technical achievement in advancing understanding of ecological risk assessment and its role in public policy, and for scientific and technical achievement in integrating science, policy, ecological health, and the decline of Pacific Northwest salmon.</p>
	<p>1. Pacific salmon, ecological health and public policy (Ecosystem. Health, <b>2</b>(1):61-68, 1966)</p> <p>2. Pacific salmon and Endangered Species Act (Northwest Science, <b>70</b>(3):281-284, 1966)</p>			<p><i>(Note: Nomination RA0124 was reclassified by the review committee into the Risk Management category. During the review and evaluation process, the review committee combined nominations RA0124 and RM0123 into a single nomination with a recommended award level of III.)</i></p>

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Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
<b>Nominations Recommended for Honorable Mention (no cash award) - Total of Seven</b>				
CS0001	Tracking a <i>Salmonella</i> serovar <i>Typhimurium</i> outbreak in Gideon, Missouri: Role of contaminant propagation modelling (J. Water Supply, Research and Technology, <b>45</b> (4):171-183, 1996)	<p><b>Dr. Robert M. Clark</b>  <b>Mr. Edwin E. Geldreich</b>  <b>Mr. Kim R. Fox</b>  <b>Dr. Eugene W. Rice</b>  <b>Mr. Clifford H. Johnson</b>  <b>Mr. James A. Goodrich</b>  <b>Ms. Judith A. Barnick-Wulfekuhl</b></p> <p>National Risk Management Research Laboratory, Cincinnati, OH</p> <p>(Ineligible author: Ms. Farzaneh Abdesaken)</p>	HONORABLE MENTION	For their outstanding efforts in conducting a research study that will result in significant public health benefits to drinking water consumers throughout the world.
EC0048	Bioenergetics-based model for accumulation of polychlorinated biphenyls by nestling tree swallows, <i>Tachycineta bicolor</i> (Environmental Science and Technology, <b>29</b> (3):604-612, 1995)	<p><b>Dr. John W. Nichols</b>  <b>Dr. Gerald T. Ankley</b></p> <p>National Health and Environmental Effects Research Laboratory, Duluth, MN</p> <p>(Ineligible authors: Mr. Christen P. Larsen, Dr. Michael E. McDonald and Dr. Gerald J. Niemi)</p>	HONORABLE MENTION	Bioenergetics-based model for accumulation of polychlorinated biphenyls by nestling tree swallows, <i>Tachycineta bicolor</i> .

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
EC0049	<p>1. Effects of diflufenuron on the reproductive success of the bluegill sunfish, <i>Lepomis macrochirus</i> (Environ. Tox. Chem, <b>14</b>(8):1345-1355, 1995)</p> <p>2. Effects of azinphos-methyl on the reproductive success of the bluegill sunfish, <i>Lepomis macrochirus</i>, in littoral enclosures (Ecotox. Environ. Safety, <b>32</b>:184-193, 1995)</p> <p>3. Effects of esfenvalerate on the reproductive success of the bluegill sunfish, <i>Lepomis macrochirus</i>, in littoral enclosures (Arch. Environ. Contamin. Toxocol., <b>31</b>:244-251, 1996)</p>	<p><b>Mr. Danny K. Tanner</b>  <b>Dr. Mary F. Moffet</b>  <b>Mr. Michael L. Knuth</b></p> <p>National Health and Environmental Effects Research Laboratory, Duluth, MN</p>	HONORABLE MENTION	Determining effects of pesticides on reproductive success of bluegill ( <i>Lepomis macrochirus</i> ) within littoral enclosures.
EC0050	Aquatic safety of <i>Lagenidium giganteum</i> : Effects on freshwater fish and invertebrates (J. Inverte. Pathol., <b>64</b> :228-233, 1994)	<p><b>Dr. Richard L. Anderson</b></p> <p>National Health and Environmental Effects Research Laboratory, Duluth, MN</p> <p>(Ineligible author: Ms. Lori Nestrud)</p>	HONORABLE MENTION	Aquatic safety of <i>Lagenidium giganteum</i> : Effects on freshwater fish and invertebrates
EC0052	Influence of ultraviolet light on the toxicity of sediments contaminated with polycyclic aromatic hydrocarbons (Environ. Tox. Chem, <b>13</b> (1):1791-1796, 1994)	<p><b>Dr. Gerald T. Ankley</b>  <b>Mr. Scott Collyard</b></p> <p>National Health and Environmental Effects Research Laboratory, Duluth, MN</p> <p>(Ineligible authors: Mr. Philip D. Monson and Ms. Patricia A. Kosian)</p>	HONORABLE MENTION	Phototoxicity of PAHs in sediments.

Nom. #	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Recommended Award Level	Suggested Citation from Nominating Organization (SAB Comments in paren.)
EC0137	Invading and metastasizing cardiac hemangioendothelial neoplasms in a cohort of the fish <i>Rivulus marmoratus</i> : Unusually high prevalence, histopathology and possible etiologies (Cancer Research, <b>55</b> (11):2438-2447, 1995)	<b>Dr. John A. Couch</b> National Health and Environmental Effects Research Laboratory, Gulf Breeze, FL	HONORABLE MENTION	For providing new insights into cardiovascular neoplasms in vertebrate species, and for novel uses of animal models in cancer research.
RA0130	A clam's eye view of the bioavailability of sediment-associated pollutants (In: Organic Substances and Sediments in Water, Vol. III: Biological, R. Baker (ed.), Lewis Publ., Chelsea, MI, Chap. 5, pp 73-93, 1991)	<b>Dr. Henry Lee II</b> National Health and Environmental Effects Research Laboratory, Corvallis, OR	HONORABLE MENTION	Clam's eye view of sediment bioavailability.