



# **AN SAB REPORT: RECOMMENDATIONS ON THE 1992 SCIENTIFIC AND TECHNOLOGICAL ACHIEVEMENT AWARD NOMINATIONS**

**PREPARED BY THE SCIENTIFIC  
AND TECHNOLOGICAL  
ACHIEVEMENT AWARDS  
SUBCOMMITTEE OF THE  
RESEARCH STRATEGIES  
ADVISORY COMMITTEE**





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

April 26, 1993

OFFICE OF THE ADMINISTRATOR  
SCIENCE ADVISORY BOARD

EPA-SAB-RSAC-93-012

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

Subject: SAB Award Recommendations for the 1992 Scientific and  
Technological Achievement Awards Program

Dear Ms. Browner:

The Science Advisory Board's 1992 Scientific and Technological Achievement Awards (STAA) Subcommittee has completed its review of the 137 papers nominated 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 once again has done an excellent job in collecting and distributing these nominations. Each year 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 there has been a general improvement in the overall quality of the papers nominated, as reflected in the greater percentage of papers recommended for awards (28 percent) this year. The Subcommittee is recommending a total of 39 awards, including awards for papers in each of the eight nomination categories. The 1992 STAA program included two new nomination categories, established at the recommendation of the Board: Emerging Research Issues and Innovative Approaches, and Risk Management and Policy Formulation. We hope to see more and higher quality nominations in these two categories next year. Although all authors recommended for awards this year are from ORD, the Subcommittee encourages the Agency to nominate peer-reviewed papers from all programs and areas of scientific research.

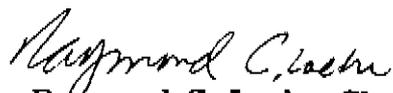
The Subcommittee continues to feel that the STAA program is an important mechanism for recognizing and promoting high quality, peer-reviewed work published in top scientific and technological journals. We are pleased to have



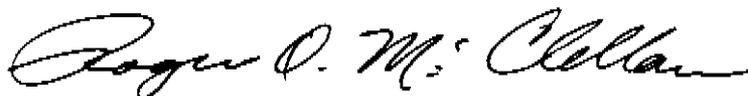
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participated in this process and believe it is appropriate for the Board to to continue this annual review function. We would appreciate being informed of the final disposition of awards, and we look forward to serving the Agency again in this important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

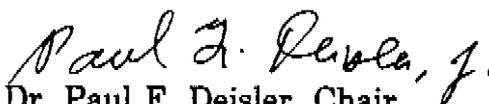
Sincerely,



Dr. Raymond C. Loehr, Chair  
Executive Committee  
Science Advisory Board



Dr. Roger O. McClellan, Chair  
Research Strategies Advisory  
Committee  
Science Advisory Board



Dr. Paul F. Deisler, Chair  
1992 Scientific and  
Technological Achievement  
Awards Subcommittee  
Science Advisory Board

Enclosure

## U.S. ENVIRONMENTAL PROTECTION AGENCY

### NOTICE

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## ABSTRACT

This report represents the conclusions and recommendations of the U.S. Environmental Protection Agency's Science Advisory Board regarding the 1992 EPA Scientific and Technological Achievement Awards (STAA) program. The STAA Subcommittee of the Science Advisory Board reviewed and evaluated the 137 papers nominated in eight scientific and technical categories for the 1992 STAA awards. The Subcommittee recommended 39 papers (28 percent of the nominations) for awards at three levels and also recommended to the Office of Research and Development (ORD) that six additional papers be recognized with honorable mention. The Subcommittee recommended awards for papers from ten EPA research laboratories and two offices within the ORD. 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

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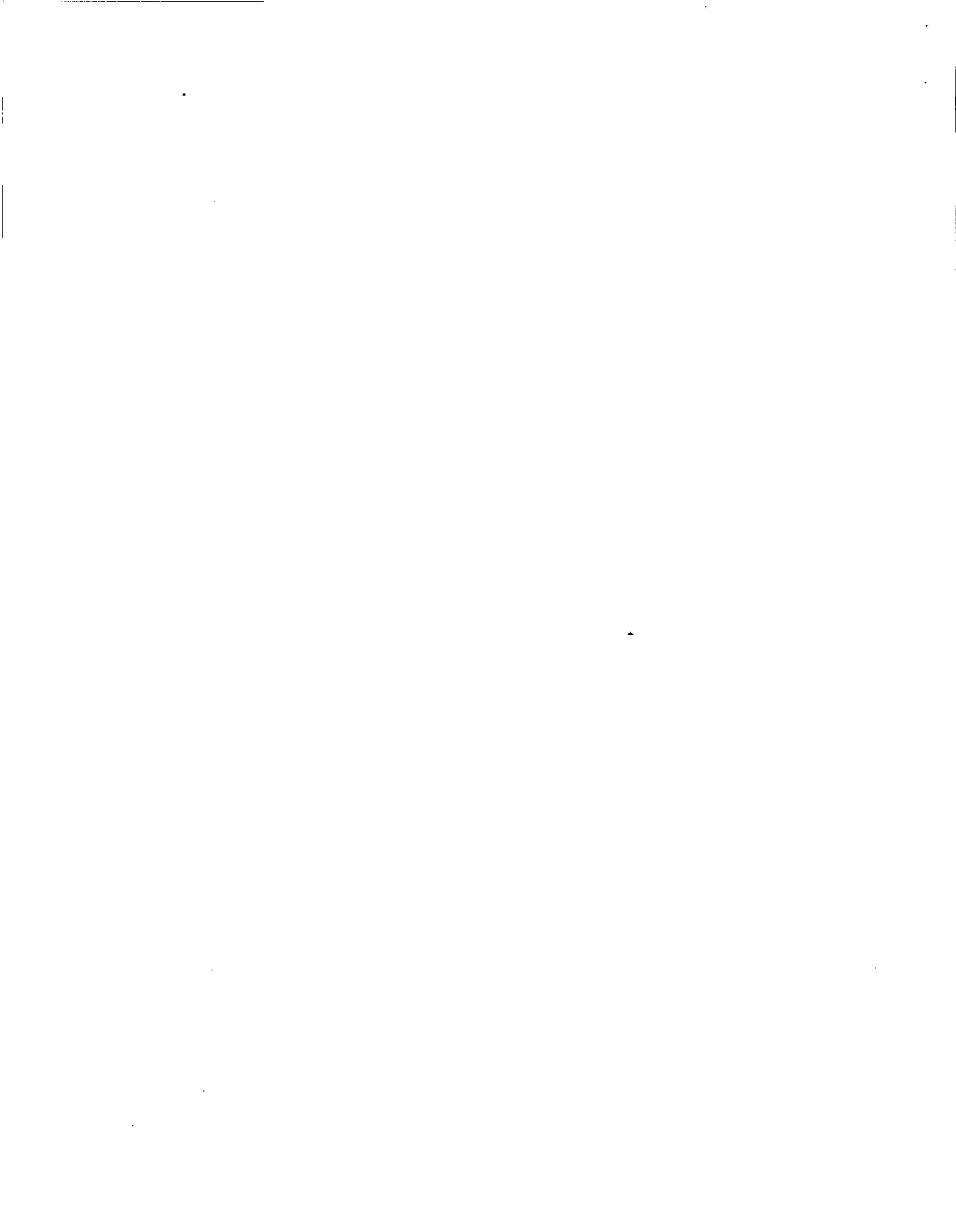
Ms. Stephanie Sanzone, Designated Federal Official

Mrs. Marcia K. Jolly (Marcy), Secretary to the Designated Federal Official



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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 1992 nominations for the STAA program. The Subcommittee evaluated 137 nominations of scientific and technical papers that were nominated by EPA research laboratory directors and program office division directors. The Subcommittee met in Washington, D.C., on March 3-4, 1993, to determine award recommendations.

The Subcommittee recommended thirty-nine papers for awards and recommended that six 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. However, the Subcommittee recommended awards for papers from ten EPA research laboratories and two offices within the Office of Research and Development.

## 2. INTRODUCTION

### 2.1 Request and Charge for Science Advisory Board Review

At the request of the Office of Research and Development (ORD), the Science Advisory Board agreed to convene a subcommittee to review and evaluate scientific and technological papers published by EPA authors and nominated for the 1992 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 1992, the Office of Research Program Management (ORPM) in ORD provided the SAB with copies of 137 nominations, and the 1992 STAA Nomination Procedures and Guidelines, which describes the award levels and eligibility criteria. ORPM grouped the papers into eight categories of science and technology, and screened the papers for conformance with the nomination guidelines.

As described in the 1992 STAA Nomination Procedures and Guidelines, the SAB was asked to recommend papers for each of three Levels of Award. 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. 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. 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.

## 2.2 Subcommittee Review Procedures

Copies of all papers and the award program guidelines were provided to Subcommittee members in advance of the review meeting. Subcommittee members selected papers to review based on their expertise; 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 to review. To ensure the credibility of the review process and broaden the base of expertise available to the Subcommittee, additional reviews were obtained from experts by mail. The Subcommittee would like to recognize the assistance of the following reviewers:

Dr. Michael Gallo	Robert Wood Johnson Medical School
Dr. David Gaylor	National Center for Toxicological Research
Dr. Robert Huggett	Virginia Institute of Marine Sciences
Dr. Timothy Larson	University of Washington
Dr. Howard Rockette	University of Pittsburgh
Dr. Jonathan Samet	New Mexico Tumor Registry
Dr. William Smith	Yale University
Dr. HansPeter Witschi	University of California, Davis
Dr. Terry Young	Environmental Defense Fund

The Subcommittee met on March 3-4, 1993, in Washington, DC in a closed meeting. Consistent with the requirements of the Federal Advisory Committee Act, this closed meeting was announced in a Federal Register notice signed by the EPA Administrator. All Subcommittee members were present. The Subcommittee developed preliminary ratings for papers in each category, including discussion of each nominated paper. The Subcommittee made note of papers which 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.

### **3. EVALUATION OF THE 1992 SCIENTIFIC AND TECHNOLOGICAL ACHIEVEMENT AWARDS NOMINATIONS**

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

The Subcommittee felt that there was a general improvement in the overall quality of the papers nominated, continuing a trend from past years. The Agency should continue to focus on improving the quality of 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. Although all of the authors recommended for awards this year are from the Office of Research and Development, the Subcommittee encourages the Agency to continue to broaden the scope of nominated papers and to promote multi-disciplinary research.

In the interest of maintaining and improving the quality of the papers nominated for STAA awards, the Subcommittee urges greater involvement by EPA Laboratory and Office Directors in screening nominations for high scientific/technical merit and consistency with the eligibility criteria. The nomination statement is important in providing a context for the research, particularly where the paper is one in a series of published works. The Subcommittee found this information very helpful in evaluating the papers. However, the Subcommittee feels that nomination statements should not be written by the author(s). In several instances, the justification provided for the EPA researcher as lead author was not convincing. For example, the Subcommittee felt that the paper, "Remobilization of Toxic Heavy Metals Adsorbed to Bacterial Wall-Clay Composites" (T9211), while prizeworthy, was ineligible under the STAA program criteria since the nomination contained inadequate justification for the EPA employee as the principal author.

In order to evaluate papers which present incremental results in a series of published works, the Subcommittee recommends that the nomination guidelines explicitly require discussion of related research published previously by the lead author(s), including information on any STAA awards given. It may also be helpful to revise the requirement limiting nominated papers to those published in the previous two years, so that earlier papers in a series could be included in a nomination. This would allow a series of incremental studies to be evaluated for an award as a package.

The 1992 STAA program included two new categories of papers, established at the recommendation of the STAA Subcommittee of the SAB: Emerging Research Issues and Innovative Approaches, and Risk Management and Policy Formulation. Fewer papers were nominated in these categories, which is not surprising in the first year. The Subcommittee hopes to see more and higher quality papers nominated in the Risk Management and Policy Formulation

category next year, as this is an important area of research for the Agency. With regard to the category on Emerging Research Issues and Innovative Approaches, the Subcommittee feels that "innovative approaches" to research are expected in all categories. Therefore, the Subcommittee proposes that the category be retitled as "Emerging Research Issues" or "Emerging Issues and New Directions" to focus more on the long-term, anticipatory aspects of Agency research.

Finally, the Subcommittee wishes to recognize and encourage quality collaborative research between EPA and industry researchers. Several papers exhibiting this collaboration were recommended for honorable mention.

### 3.2 Award Recommendations

The EPA authors recommended for awards include scientists from ten EPA research laboratories and two offices within ORD. Awards were recommended for each of the eight nomination categories. A total of 39 papers were recommended for awards. A summary of the distribution of award recommendations among categories is presented in Table 1.

Table 1: Summary of 1992 Award Recommendations

Nomination Categories	Number Nominated <sup>1</sup>	Award Levels			Total Awards	(Percent)
		III	II	I		
Control Systems & Technology	20	5	1	-	6	(30%)
Ecology	16	4	2	-	6	(38%)
Emerging Research Issues & Innovative Approaches	11	2	2	-	4	(36%)
Health Effects	31	7	3	1	11	(35%)
Monitoring & Measurement Methods	12	1	-	-	1	( 8%)
Review Articles	25	2	2	-	4	(16%)
Risk Management & Policy Formulation	7	2	-	-	2	(29%)
Transport & Fate	15	5	-	-	5	(33%)
Totals	137	28	10	1	39	(28%)

<sup>1</sup>Reflects papers as recategorized by the Subcommittee (see Appendix A)

The Subcommittee recommendations for awards are listed below for the eight categories defined by the STAA Program: Control Systems and Technology, Emerging Research Issues and Innovative Approaches, Ecology, Health Effects, Monitoring and Measurement Methods, Review Articles, Risk Management and Policy Formulation, and Transport and Fate.

### 3.2.1 Control Systems and Technology

#### Level II Award

C9208

**Title:**

Searching For A Water Supply Connection in the Cabool, Missouri Disease Outbreak of *Escherichia coli* 0157:H7

**Journal:**

Water Research

Volume 26, Number 8, Pages 1127-1137, August 1992

**EPA Author(s):**

Dr. Robert M. Clark

Mr. Kim R. Fox

Mr. Edwin E. Geldreich

Dr. James A. Goodrich

Dr. Eugene W. Rice

**Non-EPA Author(s):**

Dr. David L. Swerdlow

#### Level III Awards

C9202

**Title:**

Virus Removal and Recovery in the Drinking Water Treatment Train

**Journal:**

Water Research

Volume 26, Number 6, Pages 727-731, 1992

**EPA Author(s):**

Dr. Christon J. Hurst

Mr. Ronald E. Stetler

Mr. Steven C. Waltrip

C9213

Title:  
Sorbent/Urea Slurry Injection for Simultaneous SO<sub>2</sub>/NO<sub>x</sub> Removal

Journal:  
Environmental Progress  
Volume 11, Number 2, Pages 155-162, May 1992

EPA Author(s):  
Dr. Brian K. Gullett

Non-EPA Author(s):  
Mr. Kevin R. Bruce  
Mr. Walter F. Hansen  
Mr. John E. Hofmann

C9215 and C9217: a combined award

Title:  
Efficacy of commercial inocula in enhancing biodegradation of weathered crude oil contaminating a Prince William Sound beach

Journal:  
Journal of Industrial Microbiology  
Volume 10, Pages 1-11, October 1992

EPA Author(s):  
Dr. John R. Haines  
Dr. Albert D. Venosa

Non-EPA Author(s):  
Dr. David M. Allen

AND

Title:  
Efficacy of commercial products in enhancing oil biodegradation in closed laboratory reactors

Journal:  
Journal of Industrial Microbiology  
Volume 10, Pages 13-23, October 1992

EPA Author(s):  
Dr. John R. Haines  
Dr. Albert D. Venosa

**Non-EPA Author(s):**

Dr. Rakesh Govind  
Dr. Wipawan Nisamaneepong  
Mr. Salil Pradhan  
Dr. Belal Siddique

**C9216**

**Title:**

Modelling human exposure to contaminants from drinking water

**Journal:**

Journal of Water Supply Research - Aqua  
Volume 41, Number 4, Pages 224-230, 1992

**EPA Author(s):**

Dr. Robert M. Clark  
Dr. James A. Goodrich

**T9206**

**Title:**

Integrated Model for Predicting the Fate of Organics in Wastewater Treatment Plants

**Journal:**

Environmental Progress  
Volume 10, Number 1, Pages 13-23, 1991

**EPA Author(s):**

Dr. Richard A. Dobbs

**Non-EPA Author(s):**

Dr. Rakesh Govind  
Ms. Lei Lai

**3.2.2 Ecology**

**Level II Awards**

**E9203**

**Title:**

Carcinogenicity of Black Rock Harbor Sediment to the Eastern Oyster and Trophic Transfer of Black Rock Harbor Carcinogens from the Blue Mussel to the Winter Flounder

Journal:  
Environmental Health Perspectives  
Volume 90, Pages 53-66, April 10, 1991

EPA Author(s):  
Mr. George R. Gardner  
Dr. A. Russell Malcolm  
Mr. Paul P. Yevich

Non-EPA Author(s):  
Dr. John R. Harshbarger

E9207

Title:  
Stress Interactions and Mycorrhizal Plant Response: Understanding Carbon Allocation Priorities

Journal:  
Environmental Pollution  
Volume 73, Pages 217-244, 1991

EPA Author(s):  
Dr. Christian P. Andersen  
Dr. Paul T. Rygielwicz

### Level III Awards

E9205

Title:  
Spongiosis Hepatis: Chemical Induction, Pathogenesis, and Possible Neoplastic Fate in a Teleost Fish Model

Journal:  
Toxicologic Pathology  
Volume 19, Number 3, Pages 237-250, December 1991

EPA Author(s):  
Dr. John A. Couch

E9208

Title:  
Potential Future Effects of Current Levels of Sulfur Deposition on Stream Chemistry in the Southern Blue Ridge Mountains, U.S.

**Journal:**  
Water, Air, and Soil Pollution  
Volume 50, Pages 39-48, 1990

**EPA Author(s):**  
Dr. M. Robbins Church

**Non-EPA Author(s):**  
Dr. Keith N. Eshleman  
Mr. Barry P. Rochelle  
Dr. Paul W. Shaffer

**E9211 - Multiple Papers**

**Title 1:**  
The role of acid-volatile sulfide in determining cadmium bioavailability and toxicity in freshwater sediments

**Journal:**  
Environmental Toxicology and Chemistry  
Volume 10, Number 10, Pages 1309-1319, October 1991

**Title 2:**  
Acid-volatile sulfide as a factor mediating cadmium and nickel bioavailability in contaminated sediments

**Journal:**  
Environmental Toxicology and Chemistry  
Volume 10, Number 10, Pages 1299-1307, October 1991

**EPA Author(s):**  
Dr. Gerald T. Ankley  
Mr. Duane A. Benoit  
Mr. Anthony R. Carlson  
Mr. David J. Hansen  
Mr. Edward N. Leonard  
Mr. Vincent R. Mattson  
Mr. Gary L. Phipps

**Non-EPA Author(s):**  
Ms. Anne M. Cotter  
Mr. Joseph R. Dierkes  
Ms. Patricia A. Kosian  
Dr. John D. Mahony

T9216

Title:

Temporal Changes in the Benthos along a Pollution Gradient: Discriminating the Effects of Natural Phenomena from Sewage - Industrial Wastewater Effects

Journal:

Estuarine Coastal and Shelf Science  
Volume 33, Pages 383-407, 1991

EPA Author(s):

Ms. Faith A. Cole  
Dr. S. Ferraro  
Dr. Donald W. Schults  
Dr. Richard C. Swartz

**3.2.3 Emerging Research Issues and Innovative Approaches**

**Level II Awards**

I9201

Title:

Consideration of Pharmacokinetics and Temporal Sensitivity for Hydroxyurea in Relation to Teratogenic Potential

Journal:

Journal of The American College of Toxicology  
Volume 10, Number 2, Pages 269-278, 1991

EPA Author(s):

Dr. Robert P. Beliles

Non-EPA Author(s):

Dr. N. G. Makris  
Dr. W. J. Scott

R9221

Title:

Modeling the joint toxicity of xenobiotics to aquatic organisms: Basic concepts and approaches

Journal:

Aquatic Toxicology and Risk Assessment  
Volume 14, Pages 107-127, 1991

EPA Author(s):  
Dr. Steven James Broderius

**Level III Awards**

**I9212**

Title:  
Predicting Chemical Reactivity by Computer

Journal:  
Environmental Toxicology and Chemistry  
Volume 10, Number 11, Pages 1405-1416, November 1991

EPA Author(s):  
Mr. Samuel W. Karickhoff  
Ms. Valeta K. McDaniel

Non-EPA Author(s):  
Mr. Lionel A. Carreira  
Mr. Clyde Melton  
Mr. Donald E. Nute  
Mr. Andre Vellino

**I9213**

Title:  
On Estimating Agriculture's Net Contribution to Atmospheric Carbon

Journal:  
Water, Air and Soil Pollution  
Volume 64, Number 1/2, Pages 121-137, August 1992

EPA Author(s):  
Mr. Robert B. Jackson IV

**3.2.4 Health Effects**

**Level I Award**

**H9225**

Title:  
Direct Effects of Ethane Dimethanesulphonate on Epididymal Function in Adult Rats: An In Vitro Demonstration

Journal:  
Journal of Andrology  
Volume 13, Number 5, Pages 409-421, September 10, 1992

EPA Author(s):  
Dr. Gary R. Klinefelter

Non-EPA Author(s):  
Ms. Naomi L. Roberts  
Mr. Juan D. Suarez

## Level II Awards

H9209

Title:  
Chemical Characterization of Mutagenic Fraction of Particles from Indoor Coal  
Combustion: A Study of Lung Cancer in Xuan Wei, China

Journal:  
Environmental Science and Technology  
Volume 26, Number 5, Pages 999-1004, May 1992

EPA Author(s):  
Dr. Judy S. Mumford

Non-EPA Author(s):  
Dr. Shoren Cao  
Ms. Jane C. Chuang  
Dr. Stephen A. Wise

H9223

Title:  
Morphological Transformation and DNA Formation by Benz[*j*]aceanthrylene and  
Its Metabolites in C3H10T $\frac{1}{2}$ CL8 Cells: Evidence for Both Cyclopenta-Ring and  
Bay-Region Metabolic Activation Pathways

Journal:  
Cancer Research  
Volume 51, Pages 6163-6169, November 15, 1991

EPA Author(s):  
Dr. Stephen Nesnow  
Dr. Jeffrey Ross

Non-EPA Author(s):  
Ms. Susan Curti  
Dr. Avram Gold  
Ms. Jessica Lasley  
Mr. Garret Nelson  
Dr. Ramiah Sanqaiah

**H9226 - Multiple Papers**

Title 1:  
Assessing Developmental Hazard: The Reliability of the A/D Ratio

Journal:  
Teratology  
Volume 44, Number 6, Pages 653-665, December 1991

Title 2:  
Interspecies Comparisons of A/D Ratios: A/D Ratios are not Constant Across Species

Journal:  
Fundamental and Applied Toxicology  
Volume 17, Number 4, Pages 696-722, November 1991

EPA Author(s):  
Dr. John M. Rogers

Non-EPA Author(s):  
Mr. Donald Baines  
Dr. George Daston  
Ms. Sarah S. Marsh  
Dr. Thomas D. Sabourin  
Dr. R. Woodrow Setzer  
Dr. Don Versteeg

**Level III Awards**

**H9204**

Title:  
Chloroform inhibits the development of diethylnitrosamine - initiated, phenobarbital-promoted  $\gamma$ -glutamyltranspeptidase and placental form glutathione S-transferase-positive foci in rat liver.

Journal:  
Carcinogenesis  
Volume 13, Number 8, Pages 1325-1330, June 1992

EPA Author(s):

Dr. F. Bernard Daniel  
Dr. Edith L. C. Lin  
Dr. T. V. Reddy  
Dr. Judy A. Stober

Non-EPA Author(s):

Dr. Gregory R. Olson

H9220 - Multiple Papers

Title 1:

Exposure of Humans to a Volatile Organic Mixture. I. Behavioral Assessment

Journal:

Archives of Environmental Health  
Volume 47, Number 1, Pages 23-30, January 1992

Title 2:

Exposure of Humans to a Volatile Organic Mixture. II. Sensory

Journal:

Archives of Environmental Health  
Volume 47, Number 1, Pages 31-38, January 1992

Title 3:

Exposure of Humans to a Volatile Organic Mixture. III. Inflammatory Response

Journal:

Archives of Environmental Health  
Volume 47, Number 1, Pages 39-44, January 1992

EPA Author(s):

Dr. Robert B. Devlin  
Ms. Delores Graham  
Mr. Dennis E. House  
Dr. H. Kenneth Hudnell  
Dr. Hillel S. Koren  
Dr. David A. Otto

Non-EPA Author(s):

Mr. Wayne B. Counts, Jr.  
Dr. Lars Molhave

H9222

Title:

Glucocorticoids regulate the synthesis of glial fibrillary acidic protein in intact and adrenalectomized rats but do not affect its expression following brain injury.

Journal:

Journal of Neurochemistry  
Volume 57, Pages 860-869, 1991

EPA Author(s):

Dr. James P. O'Callaghan

Non-EPA Author(s):

Dr. Roberta E. Brinton  
Dr. Bruce S. McEwen

H9224

Title:

Paraoxon Toxicity is Not Potentiated by Prior Reduction in Blood Acetylcholinesterase

Journal:

Toxicology and Applied Pharmacology  
Volume 117, Pages 110-115, November 1992

EPA Author(s):

Dr. Stephanie Padilla

Non-EPA Author(s):

Dr. W. S. Brimijoin  
Dr. Virginia C. Moser  
Dr. Carey N. Pope

H9227

Title:

Comparisons of the Effects of TCDD and Hydrocortisone on Growth Factor Expression Provide Insight Into Their Interaction in the Embryonic Mouse Palate

Journal:

Teratology  
Volume 45, Pages 35-53, January 1992

EPA Author(s):

Ms. Barbara D. Abbott  
Ms. Linda S. Birnbaum

Non-EPA Author(s):  
Ms. Martha W. Harris

H9229 - Multiple Papers

Title 1:  
Effects of Methyl Benzimidazolecarbamate during Early Pregnancy in the Rat

Journal:  
Fundamental and Applied Toxicology  
Volume 15, Pages 528-535, 1990

Title 2:  
Use of Bromoergocryptine in the Validation of Protocols for the Assessment of Mechanisms of Early Pregnancy Loss in the Rat

Journal:  
Fundamental and Applied Toxicology  
Volume 17, Pages 563-574, 1991

Title 3:  
Validation of Protocols for Assessing Early Pregnancy Failure in the Rat:  
Clomiphene Citrate

Journal:  
Fundamental and Applied Toxicology  
Volume 16, Pages 506-516, 1991

EPA Author(s):  
Dr. Audrey M. Cummings  
Mrs. Georgia Rehnberg  
Dr. Sally Perreault

Non-EPA Author(s):  
Ms. Sandra Harris

H9230 - Multiple Papers

Title 1:  
Structure-Activity Relationships in the Developmental Toxicity of Substituted Phenols: In Vivo Effects

Journal:  
Teratology  
Volume 41, Pages 43-59, 1990

**Title 2:**

**In Vitro Embryotoxicity of a Series of Para-Substituted Phenols: Structure, Activity, and Correlation with In Vivo Data**

**Journal:**

**Teratology**

**Volume 45, Pages 11-33, 1992**

**Title 3:**

**In Vivo and In Vitro Structure-Dosimetry-Activity Relationships of Substituted Phenols in Developmental Toxicity Assays**

**Journal:**

**Reproductive Toxicology**

**Volume 5, Pages 255-258, 1991**

**EPA Author(s):**

**Dr. Frank Copeland**

**Ms. Marian Ebron-McCoy**

**Dr. Henry Fisher**

**Dr. Larry Hall**

**Dr. Robert J. Kavlock**

**Non-EPA Author(s):**

**Ms. Patricia Beyer**

**Ms. Tina Logsdon**

**Dr. Linda Ogelsby**

**3.2.5 Monitoring and Measurement Methods**

**Level III Award**

**M9202**

**Title:**

**Characterization of nitrogen-containing aromatic compounds in soil and sediment by capillary gas chromatography-mass spectrometry after fractionation**

**Journal:**

**Journal of Chromatography**

**Volume 558, Number 1, Pages 223-233, September 27, 1991**

**EPA Author(s):**

**Mr. George Michael Brilis**

**Ms. Cynthia M. Brownrigg**

**Dr. William C. Brumley**

### **3.2.6 Review Articles**

#### **Level II Awards**

R9209

Title:  
Industrial Pollution Prevention: A Critical Review

Journal:  
Journal of the Air & Waste Management Association  
Volume 42, Number 5, Pages 618-656, May 1992

EPA Author(s):  
Ms. Mary Ann Curran  
Mr. Harry M. Freeman  
Ms. Teresa Harten  
Mr. Paul M. Randall  
Mr. Johnny Springer, Jr.  
Mr. Kenneth R. Stone

R9217

Title:  
The genotoxicity of industrial wastes and effluents: A review

Journal:  
Mutation Research  
Volume 277, Number 2, Pages 91-138, 1992

EPA Author(s):  
Ms. Virginia Stewart Houk

#### **Level III Awards**

R9203

Title:  
Synthesis of Environmental Evidence: Nitrogen Dioxide Epidemiology Studies

Journal:  
Journal of Air and Waste Management Association  
Volume 42, Number 5, Pages 662-671, May 1992

EPA Author(s):  
Dr. Dennis J. Kotchmar

Non-EPA Author(s):  
Dr. David Eddy  
Dr. Victor Hasselblad

R9208

Title:  
Contamination of Shellfish by Stool-Shed Viruses: Methods of Detection

Journal:  
Environmental Science and Technology  
Volume 26, Number 4, Pages 689-696, April 1992

EPA Author(s):  
Dr. G. Shay Fout  
Mr. Fred P. Williams, Jr.

### 3.2.7 Risk Management and Policy Formulation

#### Level III Awards

P9205

Title:  
Toxicity Equivalency Factors for PCBs?

Journal:  
Quality Assurance, Good Practice, Regulation and Law  
Volume 1, Number 1, Pages 70-81, 1991

EPA Author(s):  
Dr. William P. Wood  
Dr. Ann Alford-Stevens  
Dr. Dorothy Patton  
Dr. Linda S. Birnbaum  
Dr. Frederick Kutz

Non-EPA Author(s):  
Dr. Donald Barnes

P9208

Title:  
Development and Use of Site-Specific Chemical and Biological Criteria for  
Assessing New Bedford Harbor Pilot Dredging Project

**Journal:**  
Environmental Management  
Volume 15, Number 1, Pages 105-112, March 1991

**EPA Author(s):**  
Mr. David J. Hansen  
Dr. William G. Nelson

### **3.2.8 Transport and Fate**

#### **Level III Awards**

##### **T9202**

**Title:**  
Lidar Descriptions of Mixing-Layer Thickness Characteristics in a Complex Terrain/Coastal Environment

**Journal:**  
Journal Applied Meteorology  
Volume 30, Number 5, Pages 585-597, May 1991

**EPA Author(s):**  
Dr. James L. McElroy

**Non-EPA Author(s):**  
Mr. Ted B. Smith

##### **T9204**

**Title:**  
Comparison of Data from an IAQ Test House with Predictions of an IAQ Computer Model

**Journal:**  
Indoor Air  
Volume 4, Number 4, Pages 577-592, December 1991

**EPA Author(s):**  
Mr. Merrill D. Jackson  
Dr. Leslie E. Sparks  
Dr. Bruce A. Tichenor  
Mr. James B. White

T9208

Title:

Application of the Group Contribution Method for Predicting the Toxicity of Organic Chemicals

Journal:

Environmental Toxicology and Chemistry  
Volume 11, Pages 631-636, 1992

EPA Author(s):

Mr. Henry H. Tabak

Non-EPA Author(s):

Mr. Chao Gao  
Dr. Rakesh Govind

T9213

Title:

Vertical Profiles of Toxicity, Organic Carbon, and Chemical Contaminants in Sediment Cores from the Palos Verdes Shelf and Santa Monica Bay, California

Journal:

Marine Environmental Research  
Volume 31, Pages 215-225, January 1991

EPA Author(s):

Ms. Janet O. Lamberson  
Dr. Robert J. Ozretich  
Dr. Donald W. Schults  
Dr. Richard C. Swartz

Non-EPA Author(s):

Dr. Janet K. Stull

T9219

Title:

Hydroxyl Radical Formation in Aqueous Reactions (pH 3-8) of Iron (II) with Hydrogen Peroxide: The Photo-Fenton Reaction

Journal:

Environmental Science & Technology  
Volume 26, Number 2, Pages 313-319, February 1992

EPA Author(s):  
Dr. Richard G. Zepp

Non-EPA Author(s):  
Dr. Bruce C. Faust  
Dr. Jurg Hoigne

### 3.3 Honorable Mention

The Subcommittee identified six papers which, while not reaching award level, were deserving of honorable mention. In several cases, the Subcommittee wishes to highlight quality collaborative work between EPA and industry. The Subcommittee hopes that these authors will be recognized appropriately for their high quality of work.

C9210

Title:  
Cost Analysis of Soil Depressurization Techniques for Indoor Radon Reduction

Journal:  
Indoor Air  
Volume 1, Number 3, Pages 337-351, September 1991 .

EPA Author(s):  
Mr. D. Bruce Henschel

I9203

Title:  
Chemical substitution for 1,1,1-trichloroethane and methanol in an industrial cleaning operation

Journal:  
Journal of Hazardous Materials  
Volume 29, Number 2, Pages 179-188, January 1992

EPA Author(s):  
Ms. Lisa M. Brown  
Mr. Johnny Springer, Jr.

Non-EPA Author(s):  
Mr. Matthew Bower

I9205 - Multiple Papers

Title 1:

The role of pollution in large-scale population disturbances: aquatic populations

Journal:

Environmental Science and Technology

Volume 26, Number 8, Pages 1477-1484, August 1992

Title 2:

The role of pollution in large-scale population disturbances: terrestrial populations

Journal:

Environmental Science and Technology

Volume 26, Number 9, Pages 1694-1701, September 1992

EPA Author(s):

Mr. David J. Sarokin

Non-EPA Author(s):

Mr. Jay Schulkin

H9214

Title:

Chronic exposure to a simulated urban profile of ozone alters ventilatory responses to carbon dioxide challenge in rats

Journal:

Fundamental and Applied Toxicology

Volume 17, Pages 52-60, 1991

EPA Author(s):

Dr. Daniel L. Costa

Dr. Mildred J. Wiester

Non-EPA Author(s):

Ms. Shelley Fitzgerald

Dr. Jeffrey S. Tepper

Ms. Mary F. Weber

H9221

Title:

Overview, conclusions, and recommendations of the IPCS collaborative study on complex mixtures

Journal:  
Mutation Research  
Volume 276, Pages 61-80, January 1992

EPA Author(s):  
Dr. Larry D. Claxton  
Dr. Joellen Lewtas

Non-EPA Author(s):  
Dr. George Douglas  
Dr. Dan Krewski  
Dr. H. Matsushita  
Dr. Herbert Rosenkranz

R9202

Title:  
Consideration of the Target Organ Toxicity of Trichloroethylene in Terms of  
Metabolite Toxicity and Pharmacokinetics

Journal:  
Drug Metabolism Reviews  
Volume 23, Number 5, Pages 493-599 1991

EPA Author(s):  
Dr. Robert P. Beliles

Non-EPA Author(s):  
Dr. Ivan W. F. Davidson

## APPENDIX A: PAPERS RECATEGORIZED BY THE SUBCOMMITTEE

Nominated Paper	New Category
I9202	Monitoring and Measurement Methods
I9205	Review Articles
I9209	Health Effects
I9210	Monitoring and Measurement Methods
E9201	Review Articles
H9221	Review Articles
R9216	Control Systems and Technology
R9221	Emerging Research Issues
P9207	Ecology
T9205	Control Systems and Technology
T9206	Control Systems and Technology
T9212	Control Systems and Technology
T9216	Ecology
T9218	Ecology
T9220	Review Articles

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