

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

OFFICE OF THE ADMINISTRATOR SCIENCE ADVISORY BOARD

December 18, 2008

EPA-SAB-09-008

The Honorable Stephen L. Johnson Administrator U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Subject: SAB Report of FY2008 Recommended Scientific and Technological

Achievement Awards (STAA)

Dear Administrator Johnson:

We are pleased to transmit for your consideration the Science Advisory Board's 2008 Scientific and Technological Achievement Awards report. Of 130 papers authored by Agency scientists received for nominations, the Committee recommends fifty-one for monetary awards and another forty-three for honorable mention. Of the papers recommended for awards, five were recommended for Level I, sixteen for Level II, and thirty for Level III.

The SAB commends the Agency for its support of this important program, the principal way in which science conducted within the Agency is given public recognition. We note in particular the increased monetary awards for each level as further evidence the Agency's commitment toward promoting sound science and supporting human capital. The SAB Committee has also made administrative recommendations related to the nomination procedure to facilitate future SAB reviews.

Thank you for providing us with the opportunity to assist the Agency with this important program and the SAB looks forward to reviewing the 2009 nominations.

Sincerely,

/Signed/

/Signed/

Dr. Deborah L. Swackhamer, Chair EPA Science Advisory Board

Dr. Thomas L. Theis, Chair Scientific and Technological Achievement Awards Committee

NOTICE

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1. EXECUTIVE SUMMARY

EPA's Scientific and Technological Achievement Awards (STAA) was established in 1980 to recognize Agency scientists and engineers who published their work in the peer-reviewed literature. The STAA Program is an Agency-wide competition to promote and recognize scientific and technological achievements by EPA scientists. The STAA program is administered and managed by EPA's Office of Research and Development (ORD). Each year the EPA Science Advisory Board (SAB) has been asked to review EPA's nominated scientific papers and make recommendations to the Administrator for awards. This report represents the conclusions and recommendations of the SAB regarding the FY 2008 STAA.

At a closed meeting on July 9-11, 2008, the SAB STAA Committee reviewed and evaluated 130 papers nominated for FY2008. The topical categories were: Control Systems & Technology (CS), Environmental Futures (EF), Ecological Research (ER), Health Effects Research and Human Health Risk Assessment (HE), Integrated Risk Assessment (IR), Monitoring & Measurement Methods (MM), Review Articles (RA), Risk Management and Ecosystem Restoration (RM), Social Sciences (SS), Transport and Fate (TF), and Other Environmental Research (OR). The Committee recommended a total of 51 nominations for awards, and also identified an additional 43 nominations worthy of Honorable Mention. These recommendations appear in Appendix A.

In 2004 through 2006, the Agency honored those EPA authors receiving the highest level of awards at the annual EPA Science Forum. The Committee supports the Agency's public recognition of the STAA program to encourage employees to participate, add luster to the awards, and make the general public more aware of the quality and depth of EPA science. Publication of Agency science in the peer reviewed literature is critically important to maintaining the scientific credibility of the Agency in the eyes of both the scientific community and the public. This scientific credibility provides a foundation for sound regulatory decisions by the Agency's Program Offices. The Committee further commends the Agency for raising award levels, consistent with prior recommendations.

This year, the Committee identified two administrative procedures that would strengthen the nomination process: (a) a justification must be provided in situations where scientific papers on related themes are nominated for different categories; and (b) the size of any nomination package be limited to 100 pages. In addition, to facilitate the SAB review, the Committee urges the Agency to initiate the development of a searchable database that houses information pertaining to all nominated papers and authors and those who received recognition during the previous five years.

Overall, the Committee acknowledges the importance of the STAA process and encourages 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. The Committee also strongly encourages that EPA broadly acknowledge and disseminate the results of the award competition.

2. REVIEW PROCEDURE

In 2008, the SAB convened a Committee to review and evaluate scientific and technological papers published in peer-reviewed journals by EPA authors and nominated for the FY 2008 STAA program. The current STAA Committee membership was established in 2005. The Committee was augmented with additional experts for the review of the 2008 nominations in accordance with the principles set out in the 2002 commentary of the Science Advisory Board, *Committee Formation Process: Immediate Steps to Improve Policies and Procedures* (EPA-SAB-EC-COM-02-003).

A total of 130 papers were nominated for the STAA program for 2008. Papers were grouped into twelve science and technology categories and screened for conformance with the nomination guidelines. The Committee used the EPA's *STAA Nomination Procedures and Guidelines*, which describes 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. The Committee was requested to consider each nominated paper for one of three award levels plus the honorable mention category. As defined by the Agency, these are:

- a) <u>Level I awards</u> are for nominees who have accomplished an exceptionally high-quality research or technological effort. The nomination should recognize the creation or general revision of a scientific or technological principle or procedure, or a highly significant improvement in the value of a device, activity, program, or service to the public. It must be at least of national significance or have high impact on a broad area of science/technology. The nomination must be of far reaching consequences and recognizable as a major scientific/technological achievement within its discipline or field of study.
- b) <u>Level II awards</u> are for nominees who have accomplished a notably excellent research or technological effort that has qualities and values similar to, but to a lesser degree, than those described under Level I. It must have timely consequences and contribute as an important scientific/technological achievement within its discipline or field of study.
- c) <u>Level III awards</u> are for nominees who have accomplished an unusually notable research or technological effort. The nomination can be for a substantial revision or modification of a scientific/technological principle or procedure, or an important improvement to the value of a device, activity, program, or service to the public. It must relate to a mission or organizational component of the EPA, or significantly affect a relevant area of science/technology.
- d) <u>Honorable Mention</u> The Committee has also added a fourth non-cash level award for nominations which are noteworthy but which do not warrant a Level I, II or III award. Honorable Mention applies to nominations that: (1) may not quite reach the level described for a Level III award; (2) show a promising area of research that the Committee wants to encourage; or (3) show an area of research that the

Committees feels is too preliminary to warrant an award recommendation at this time.

Copies of all nominations, the award program guidelines, and nomination evaluation criteria were provided to the Committee in advance of the review meeting.

The Committee met on July 9-11, 2008 in Washington, DC. This meeting was closed to the public to protect the personal privacy of the authors. All but two Committee Members were present at the meeting. Each Committee Member was asked to review a set of papers suited to his or her expertise. Before the meeting, all of the Committee Members provided their individual initial ratings of the papers which were subsequently organized onto a summary table and distributed to the Committee. At least two reviewers considered each nomination.

The Committee discussed the individual rankings and nominations to develop a preliminary consensus rating for each nomination. The Committee first discussed the rankings on a nomination-by-nomination basis. In some cases, additional readers reviewed the papers to provide further insights in their evaluation.

After the Committee Members achieved consensus on each individual nomination, the Committee considered whether the papers were correctly rated in comparison with one another. The Committee compared various rankings and made adjustments, where warranted, until it was comfortable that the nominations were rated consistently in relationship to one another. Papers being recommended for awards received particular attention. Nominations that were not initially recommended for an award were reconsidered to determine whether they might merit either an Honorable Mention or an award.

The final ranking agreed to at that meeting is a consensus ranking. All nominations receiving a recommendation for a Level I, II or III award or an Honorable Mention are listed in Appendix A.

The Committee's draft report (without Appendix A which identifies the award recommendations) was reviewed and approved by the Chartered SAB by e-mail correspondence in December 2008.

3. RECOMMENDATIONS

3.1 Review Recommendations

Table 1 summarizes the Level I and Level II awards by year since 1998, including the recommendations for 2008. The awards criteria for 2008 remained the same as the previous year.

TABLE 1
Comparison of Number of Level I & II Award Recommendations over Time

Award Level	FY										
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Level I	3	1	0	2	4	7	6	3	5	5	5
Level II	11	7	5	11	7	18	13	6	11	13	16
Total Level I	14	8	5	13	11	25	19	9	16	18	21
& II											

Table 2 summarizes the distribution of award recommendations for 2008 among categories. Of 130 initial nominations, the Committee recommended 51 for an award and 43 for honorable mention.

TABLE 2
Summary Number of Award Recommendations by Category For FY2008

Nomination Categories	Total Nom.					Award %	Hon. Men.
		I	II	III	Tot		
Control Systems & Technology (CS)	5	0	0	0	0	0	4**
Ecological Research (ER)	15	2	3	4*	9	60	1
Health Effects Research and Human Health	24	2	5	7	14	58	6
Risk Assessment (HE)							
Integrated Risk Assessment (IR)	8	1	0	1	2	25	5
Monitoring and Measurement Methods	20	0	4	5	9	45	4
(MM)							
Review Articles (RA)	20	0	3	5	8	40	8
Risk Management & Ecosystem Restoration	7	0	0	1	1	14	3
(RM)							
Social Sciences (SS)	1	0	0	0	0	0	1
Transport and Fate (TF)	15	0	0	3	3	20	6
Environmental Futures (EF)	2	0	0	0	0	0	0
Other Environmental Research (OR)	13	0	1	4	5	38	5
TOTALS:	130	5	16	30	51	39	43

One paper in ER linked with one paper in TF for a single award

The full list of award recommendations is contained in Appendix A.

^{**} One paper in CS linked with one paper in EF, one paper in OR, and one paper in TF for a single honorable mention

3.2 Administrative Recommendations

In the course of performing the 2008 STAA review, the committee made note of certain features of the program that might be improved for future competitions. These are related to the evaluation of the differential contributions of "bundled" papers, i.e. papers that are thematically closely linked, the need for an index of previous awards, and issues related to the quantity of materials included in the nomination packet for a given paper.

The Committee notes that it has become increasingly common for groups of papers to be nominated that have similar justifications, address themes and/or methodologies that are essentially the same, have the same or similar groups of authors, and support closely related conclusions. Often such papers are spread among different categories, and in some cases are submitted over several years (note: this does not refer the case where a paper that did not receive an award in a given year and that still meets the criteria for a subsequent nomination is resubmitted). In such cases it is often difficult, and time consuming, for the Committee to discern significant differences in intellectual and scientific contributions, confusing to find such papers spread among various categories and, since STAA does not maintain an index of previous awards, adds an element of arbitrariness to the process (i.e. the only check is reliance on the individual and collective memories of Committee members). Accordingly, the Committee makes the following recommendations:

- When more than one paper is submitted in a given year with the same principal EPA author(s) on a related theme, a clear statement must be provided that states the relevant submission category and provides an explanation for how the contribution from each paper differs. This information should be placed in a prominent position in the nominating materials.
- The Agency should begin work on a STAA index of papers that have received awards and honorable mentions during the previous five years, updated annually. The Committee understands that such an undertaking is not trivial, and suggests that this effort be completed within the next two years.

The Committee further notes that the amount of supplemental material submitted for nominated papers varies quite widely; in some cases the total nomination package can run to several hundred pages, while in others only the paper itself together with nominating forms is submitted. Such variation can create inequities as the Committee attempts to weigh the relative merit of papers within and, especially, across categories. Further, especially large sets of materials place an unnecessary burden on the reviewers. Accordingly, the Committee recommends that a limit of 100 pages be placed on the total nomination package.

The Committee further discussed a preliminary proposal put forth by ORD to allow nomination of ORD research reports, in addition to peer reviewed papers, to the STAA program but did not render a formal opinion.

Appendix A - Nominations Recommended for Awards

FY2008 Scientific and Technological Achievement Awards (STAA)

	Nominations Recomme	nded for a Level I Award	Total of 5
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08ER 0017	Tissue distribution and metabolism of benzo[a]pyrene in embryonic and larval medaka ("Oryzias latipes")	Dr. Hornung, Michael W. (55%) Dr. Nichols, John W. (15%) Dr. Cook, Philip M. (10%) Dr. Fitzsimmons, Patrick N. (10%) Dr. Kuehl, Douglas W. (10%) NHEERL	Research to Understand the Metabolism and Tissue Distribution of Toxic Chemicals in Fish Early Life Stages
S08ER 0021	A Proteomic (SELDI-TOF-MS) Approach to Estrogen Agonist Screening	Dr. Walker, Calvin C. (30%) Dr. Hemmer, Michael J. (30%) Dr. Salinas, Kimberly A. (20%) Dr. Harris, Peggy S. (10%) Dr. Vickery, Sherry S. (5%) Dr. Watts, James D. (5% Non-EPA) NHEERL	Pioneering Work Developing and Applying a Rapid Technique to Classify Chemicals by Their Toxic Action

^{*}Note: The percentages given after name represent the current percent of the total level of effort as documented in the EPA nomination

	Nominations Recommended	'd) Total of 5	
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08HE 0037	(1) Effects of perfluorooctanoic acid exposure during pregnancy in the mouse (2) Developmental toxicity of perfluorooctanoic acid (PFOA) after cross foster and restricted gestational exposure (3) Gene expression profiling in the lung and liver of PFOA-exposed mouse fetuses	Dr. Lau, Christopher (20%) Dr. Abbott, Barbara D. (17%) Dr. Rosen, Mitch (17%) Dr. Wolf, Cynthia J. (13%) Dr. Das, Kaberi (10%) Dr. Fenton, Suzanne E. (10%) Dr. Bryant, X.A. (1% Non-EPA) Dr. Calafat, A.M. (1% Non-EPA)	A Team Contribution to the Understanding of Early-Life Health Effects Following Perinatal Exposure to PFOA in Mice
S08HE 0040	(1) Exposures of preschool children to chlorpyrifos and its degradation product 3,5,6-trichloro-2-pyridinol in their everyday environments (2) An observational study of 127 preschool children at their homes and daycare centers in Ohio: environmental pathways to cis- and trans-permethrin exposure (3) Adult and Children's exposure to 2,4-D from multiple sources and pathways	Dr. Morgan, Marsha K. (33%) Dr. Sheldon, Linda S. (25%) Dr. Croghan, Carry (10%) Dr. Jones, Paul A. (10%) Dr. Thomas, Kent W. (5%) Dr. Egeghy, Peter P. (5%) Dr. Roberson, Gary L. (1%) Dr. Wilson, Nancy K. (5% Non-EPA) Dr. Chuang, Jane C. (5% Non-EPA) Dr. Lyu, Christopher (1% Non-EPA) NERL	Identifying Important Sources, Pathways, and Routes of Children's Exposures to Pesticides in Their Environments

Nominations Recommended for a Level I Award (Cont'd) Total of 5						
Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization				
(1) Mercury Exposure from Domestic and Imported Estuarine and Marine Fish in the U.S. Seafood Market	Dr. Sunderland, Elsie (80%) Dr. Mason, Robert P. (20% Non-EPA)	Development of Models Linking Mercury Emission Reductions and Concentrations in Marine Systems to Human				
(2) Human Impacts on Open Ocean Mercury Concentrations	OSP	Exposure				
	Titles and Citations of Submitted Papers (1) Mercury Exposure from Domestic and Imported Estuarine and Marine Fish in the U.S. Seafood Market (2) Human Impacts on Open Ocean	Titles and Citations of Submitted Papers Authors* and Nominating Organization (1) Mercury Exposure from Domestic and Imported Estuarine and Marine Fish in the U.S. Seafood Market (2) Human Impacts on Open Ocean Mercury Concentrations Authors* and Nominating Organization Dr. Sunderland, Elsie (80%) Dr. Mason, Robert P. (20% Non-EPA)				

	Nominations Recommen	ded for a Level II Award -	- Total of 16
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08ER 0013	(1) Progress towards development of an amphibian-based thyroid screening assay using "Xenopus laevis": Organismal and thyroidal responses to the model compounds 6-propylthiouracil, methimazole, and thyroxine (2) Metamorphic inhibition of "Xenopus laevis" by sodium perchlorate: Effects on development and thyroid histology	Dr. Degitz, Sigmund (22%) Dr. Tietge, Joseph (22%) Dr. Holcombe, Gary (15%) Dr. Kosian, Patricia (15%) Dr. Flynn, Kevin (10%) Dr. Korte, Joseph (8%) Dr. Wolf, Douglas (5%) Dr. Anderson, Leroy (3%)	Development of an Amphibian- Based Thyroid Screening Assay
S08ER 0016	Evaluating effects of low quality habitats on regional population growth in "Peromyscus leucopus": Insights from field-parameterized spatial matrix models	Dr. Grear, Jason (50%) Dr. Burns, Catherine E. (50% Non-EPA) NHEERL	Research into Methods of Assessing Localized Stressor Effects on Larger Scale Persistence of Wildlife Populations
S08ER 0022	 (1) Sources of bias in weighted average inferences of environmental conditions (2) Using biological assemblage composition to infer the values of covarying environmental factors (3) Effects of measurement error inferences of environmental conditions 		Developing New Analytical Methods That Identify the Causes of Impairment in Streams from Biological Assemblage Characteristics

^{*}Note: The percentages given after each name represent the current percent of the total level of effort as documented in the EPA nomination

	Nominations Recommended for a Level II Award (Cont'd) Total of 16								
Nom.	Titles and Citations of Submitted Papers	Eligible Authors* and Nominating Organization	Suggested Citation from Nominating Organization						
S08HE 0029	Identification of Estrogenic Compounds Emitted from the Combustion of Computer Printed Circuit Boards in Electronic Waste	Dr. Wilson, Vickie S. (40%) Dr. Owens, Clyde V. (35%) Dr. Lambright, Christy (5%) Dr. Bobseine, Kathy (5%) Dr. Gullett, Brian K. (5%) Dr. Gray, Jr., L. Earl (5%) Dr. Ryan, Bryce (5% Non-EPA) NRMRL	Exceptional Research Demonstrating the Importance of Investigating Estrogens from Computer Printed Circuit Boards						
S08HE 0032	Transcriptional responses in thyroid tissues from rats treated with a tumorigenic and a non-tumorigenic triazole conazole fungicide	Dr. Hester, Susan D. (50%) Dr. Nesnow, Stephen C. (50%) NHEERL	An Exceptional Contribution that Applied Novel Bioinformation Tools to Identify a Mode of Action for a Thyroid Tumorigenic Conazole Fungicide						
S08HE 0041	Chronic Arsenic Exposure and Cardiac Repolarization Abnormalities with QT Interval Prolongation in a Population- based Study	Dr. Mumford, Judy (50%) Dr. Sanders, William E. (12% Non-EPA) Dr. Wu, Kegong (10% Non-EPA) Dr. Kwok, Richard (10% Non-EPA) Dr. Xia, Yajuan (8% Non-EPA) Dr. Yang, Zhihui (5% Non-EPA) Dr. Foster, James (5% Non-EPA) NHEERL	Linking Chronic Arsenic Exposure and Cardiac Effects on Electrical Signals in Humans						

^{*}Note: The percentages given after each name represent the current percent of the total level of effort as documented in the EPA nomination

	Nominations Recommended	for a Level II Award (Cont	'd) Total of 16
Nom.	Titles and Citations of Submitted Papers	<u> </u>	Suggested Citation from Nominating Organization
S08HE 0045	Identification of interspecies concordance of mechanisms of arsenic-induced bladder cancer	Dr. Sen, Banalata (30%) Dr. Hester, Susan D. (25%) Dr. Wolf, Douglas C. (20%) Dr. Sen, Banalata (15% Non-EPA) Dr. Turpaz, Yaron (4% Non-EPA) Dr. Bugrim, Andrej (3% Non-EPA) Dr. Retief, Jacques (3% Non-EPA) NHEERL	In Vitro-In Vivo and Interspecies Concordance of Mechanisms of Arsenic- Induced Bladder Cancer
S08HE 0132	 Quantitative comparisons of the acute neurotoxicity of toluene in rats and humans A dosimetric analysis of the acute behavioral effects of inhaled toluene in rats Acute toluene exposure alters rat visual function in proportion to momentary brain concentration 	Dr. Bushnell, Philip J. (15%) Dr. Benignus, Vernon A. (15%) Dr. Boyes, William K. (15%) Dr. Oshiro, Wendy M. (15%) Dr. Kenyon, Elaina M. (15%) Dr. Shafer, Timothy J. (5%) Dr. Samsam, Tracey E. (5%) Dr. Krantz, Q. Todd (5%) Dr. Bercegeay, Mark (5%) Dr. Bale, Ambuja (5%) NHEERL	Research Quantifying Animal- to-Human Extrapolation in Risk Assessment, Using Toluene as a Case Study
S08M M0060	A General Indication of the Contemporary Background Levels of PCDDs, PCDFs, and Coplanar PCBs in the Ambient Air over Rural and Remote Areas of the United States	Dr. Cleverly, David H. (55%) Dr. Ferrario, Joseph (15%) Dr. Byrne, Christian (15%) Dr. Riggs, Karen (5% Non-EPA) Dr. Joseph, Darrell (5% Non-EPA) Hartford, Pamela (5% Non-EPA) NCEA	The High-Quality Scientific Achievement of Successfully Measuring Dioxins and PCBs in Rural and Remote Areas of the U.S.

	Nominations Recommended	for a Level II Award (Cont	'd) Total of 16
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08M M0062	(1) Metabolomic evaluation of rat liver and testis to characterize the toxicity of triazole fungicides (2) Raman spectroscopy-based metabolomics for differentiating exposures to triazole fungicides using rat urine (3) NMR analysis of male fathead minnow urinary metabolites: A potential approach for studying impacts of chemical exposures	Dr. Ekman, Drew R. (25%) Dr. Collette, Timothy W. (15%) Dr. Teng, Quincy (8%) Dr. Dix, David J. (6%) Dr. Ankley, Gerald T. (6%) Dr. Villeneuve, Dan L. (6%) Dr. Jensen, Kathleen M. (6%) Dr. Rockett, John C. (2%) Dr. Cherney, Daniel P. (8% Non-EPA) Dr. Keun, Hector C. (6% Non-	Establishing an Internationally Recognized Program in Environmental Metabolomics to Assess Chemical Exposure Risk
S08M M0067	(1) Mercury concentration in fish from streams and rivers throughout the western United States (2) Mercury concentration in frozen whole-fish homogenates is insensitive to holding time	Dr. Peterson, Spencer A. (49%) Dr. Van Sickle, John (15%) Dr. Peck, David V. (13%) Dr. Herlihy, Alan T. (13% Non-EPA) Dr. Hughes, Robert M. (10% Non-EPA) NHEERL	Improvement of Methods to Assess Regional Fish Tissue Mercury Contamination
S08M M0068	(1) Competitive Metagenomic DNA Hybridization Identifies Host-Specific Microbial Genetic Markers in Cow Fecal Samples (2) Identification of Bacterial DNA Markers for the Detection of Human Fecal Pollution in Water	Dr. Shanks, Orin C. (60%) Dr. Santo Domingo, Jorge W. (20%) Dr. Kelty, Catherine A. (11%) Dr. Graham, James E. (5% Non-EPA) Dr. Lu, Jingrang (2% Non-EPA) Dr. Lamendella, Regina (2% Non-EPA) NRMRL	Scientific and Technical Achievement in the Field of Water Quality Monitoring and Indicators of Fecal Pollution

^{*}Note: The percentages given after each name represent the current percent of the total level of effort as documented in the EPA nomination

Nominations Recommended for a Level II Award (Cont'd) -- Total of 16

		Suggested Citation from
Papers	Organization	Nominating Organization
of a pesticide to children in a daycare center	Dr. Nishioka, Marcia G. (24% Non-EPA) Dr. Akland, Gerald G. (14%	Research That Improves Our Understanding of Children's Exposure to Pesticides in the Residential Environment
The importance of the Montreal Protocol in protecting climate	Dr. Andersen, Stephen O. (50%) Dr. Velders, Guus J.M. (20% Non-EPA) Dr. Daniel, John S. (10% Non-EPA) Dr. Fahey, David W. (10% Non-EPA) Dr. McFarland, Mack (10% Non-EPA)	Synthesis and Communication of Stratospheric Ozone and Climate Science
	OAR	
Drowning in disinfection byproducts? Assessing swimming pool water	Dr. Richardson, Susan D. (25%) Dr. DeMarini, David M. (25%) Dr. Zwiener, Christian (25% Non-EPA) Dr. Grummt, Tamara (10% Non-EPA) Dr. Glauner, Thomas (10% Non-EPA) Dr. Frimmel, Fritz H. (5% Non-EPA)	Summarizing the Water Chemistry and Health Effects Associated with Disinfection By-Product Exposure Via Swimming
	NERL	
Occurrence, genotoxicity, and carcinogenicity of regulated and emerging disinfection by-products in drinking water: A review and roadmap for research	Dr. Richardson, Susan D. (30%) Dr. DeMarini, David M. (30%) Dr. Schoney, Rita (10%) Dr. Wagner, Elizabeth D. (15% Non-EPA) Dr. Plewa, Michael J. (15% Non-EPA) NERL	Creating a Roadmap for Research on Regulated, and Emerging, Unregulated, Disinfection By-Products in Drinking Water
	Titles and Citations of Submitted Papers (1) Characterizing residue transfer efficiencies using a fluorescent imaging technique (2) Measuring potential dermal transfer of a pesticide to children in a daycare center (3) Comparing surface residue transfer efficiencies to hands using polar and non-polar fluorescent tracers The importance of the Montreal Protocol in protecting climate Drowning in disinfection byproducts? Assessing swimming pool water Occurrence, genotoxicity, and carcinogenicity of regulated and emerging disinfection by-products in drinking water: A review and roadmap	(1) Characterizing residue transfer efficiencies using a fluorescent imaging technique (2) Measuring potential dermal transfer of a pesticide to children in a daycare center (3) Comparing surface residue transfer efficiencies to hands using polar and non-polar fluorescent tracers (3) Comparing creating polar and non-polar fluorescent tracers The importance of the Montreal Protocol in protecting climate The importance of the Montreal Protocol in protecting climate Dr. Andersen, Stephen O. (50%) Dr. Velders, Guus J.M. (20% Non-EPA) Dr. Daniel, John S. (10% Non-EPA) Dr. Fahey, David W. (10% Non-EPA) Dr. McFarland, Mack (10% Non-EPA) Dr. McFarland, Mack (10% Non-EPA) Dr. McFarland, Mack (10% Non-EPA) Dr. Grummt, Tamara (10% Non-EPA) Dr. Grummt, Tamara (10% Non-EPA) Dr. Grummt, Tamara (10% Non-EPA) Dr. Frimmel, Fritz H. (5% Non-EPA) Dr. Richardson, Susan D. (30%) Dr. Frimmel, Fritz H. (5% Non-EPA) Dr. Richardson, Susan D. (30%) Dr. Grummt, Tamara (10% Non-EPA) Dr. Richardson, Susan D. (30%) Dr. Frimmel, Fritz H. (5% Non-EPA) Dr. Richardson, Susan D. (30%) Dr. DeMarini, David M. (30%) Dr. DeMarini, David M. (30%) Dr. Schoney, Rita (10%) Dr. DeMarini, David M. (30%) Dr. DeMarini, David M. (30%)

Nominations Recommended for a Level II Award (Cont'd) -- Total of 16

N	Titles and Citations of Submitted Papers		Suggested Citation from Nominating Organization
	·		Greatly Increasing the
0	Environmental ProgramsA Policy at a Crossroads?	NCER	Agency's Understanding of the Effectiveness of Voluntary Environmental Programs

^{*}Note: The percentages given after each name represent the current percent of the total level of effort as documented in the EPA nomination

	Nominations Recommended for a Level III Award Total of 30			
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization	
S08ER 0011	Depth-specific patterns in benthic- planktonic food web relationships in Lake Superior	Dr. Sierszen, Michael E. (60%) Dr. Peterson, Gregory S. (20%) Dr. Scharold, Jill V. (20%)	Refining Depth-Specific Food Web Relationships in the Great Lakes	
		NHEERL		
S08ER 0014	Juvenile coho salmon growth and survival across stream network seasonal habitats	Dr. Ebersole, Joseph L. (45%) Dr. Wigington, Jr., Parker J. (15%) Dr. Baker, Joan P. (15%) Dr. Church, M. Robbins (5%) Dr. Cairns, Michael A. (3%) Dr. Compton, Jana E. (3%) Dr. Leibowitz, Scott G. (3%) Dr. Miller, Bruce A. (5% Non-EPA) Dr. Hansen, Bruce P. (3% Non-EPA) Dr. LaVigne, Henry R. (3% Non-EPA)	Innovative Research on the Value of Seasonal Habitats and Intermittent Streams to Coho Salmon Populations	
		NHEERL		
S08ER 0020	Characterizing seiche and tide-driven daily water level fluctuations affecting coastal ecosystems of the Great Lakes	Dr. Trebitz, Anett S. (100%)	Providing Data and Analysis Tools Enabling Characterization of Seiche and Tide as Hydrologic Drivers for Coastal Ecosystems	
		NHEERL		

	Nominations Recommended for Level III Award (Cont'd) Total of 30			
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization	
S08ER 0023 Linked with	The role of nitrogen in chromophoric and fluorescent dissolved organic matter formation		Creative Elucidation of the Role of Nitrogen in the Production of Colored Organic Substances in Coastal Ecosystems	
S08TF0 130	Production of Hydrated Electrons from Photoionization of Dissolved Organic Matter in Natural Waters	Dr. Zepp, Richard G. (50%) Dr. Wang, Wei (20% Non-EPA) Dr. Zafiriou, Oliver C. (15% Non-EPA) Dr. Blough, Neil V. (10% Non-EPA) Dr. Chan, Iu-Yam (5% Non-EPA) NERL	Creative Experimental Techniques Used to Evaluate Pollutant Reductions by Photoionization of Natural Organic Matter	
S08HE 0024	Pesticide Measurements from the First National Environmental Health Survey of Child Care Centers Using a Multi- Residue GC/MS Analysis Method	Dr. Tulve, Nicolle S. (35%) Dr. Jones, Paul A. (20%) Dr. Croghan, Carry W. (10%) Dr. Fortmann, Roy C. (5%) Dr. Nishioka, Marcia G. (10% Non-EPA) Dr. Zhou, Joey Y. (5% Non-EPA) Dr. Fraser, Alexa (5% Non-EPA) Dr. Cave, Carol (5% Non-EPA) Dr. Friedman, Warren (5% Non-EPA) NERL	Improving Our Understanding of Pesticides in Children's Everyday Environments	

Nom.	Titles and Citations of Submitted	for a Level III Award (Cont Authors* and Nominating	Suggested Citation from
_ ,	Papers	Organization	Nominating Organization
S08HE 0027	(1) Computational pharmacokinetics during developmental windows of susceptibility (2) Predicting Age-Appropriate Pharmacokinetics of Six Volatile Organic Compounds in the Rat Utilizing Physiologically Based Pharmacokinetic Modeling	Dr. Barton, Hugh A. (40%) Dr. Rodriguez, Chester E. (30%) Dr. Lipscomb, John C. (10%) Dr. Mahle, Deirdre A. (10% Non-EPA) Dr. Gearhart, Jeff M. (4% Non-EPA) Dr. Mattie, David R. (4% Non-EPA) Dr. Cook, Robert S. (2% Non-EPA) NCCT	Characterizing the Impacts of
S08HE 0030	(1) Dimethylthioarsinic anhydride: A standard for arsenic speciation	Dr. Creed, Patricia A. (22%) Dr. Creed, John T. (21%)	The Speciation of Arsenic in Uncooked and Cooked Rice to
0030	(2) Comparison of a Chemical and Enzymatic Extraction of Arsenic from	Dr. Schwegel, Carol A. (8%) Dr. Fricke, Michael W. (17% Non-EPA) Dr. Ackerman, Amanda H. (14% Non-EPA) Dr. Parks, Amy N. (4% Non-EPA) Dr. Heitkemper, Douglas T. (4% Non-EPA) Dr. Shockey, Nohora Vela (4% Non-EPA) Dr. Zeller, Matthias (2% Non-EPA) Dr. Cullen, William R. (2% Non-EPA) Dr. Witkowski, Mark (2% Non-EPA) Dr. Witkowski, Mark (2% Non-EPA)	Support Exposure Assessment in Endemic Areas
S08HE 0031	Elevated PBDE Levels In Pet Cats: Sentinels for Humans?	Dr. Dye, Janice A. (50%) Dr. Birnbaum, Linda S. (15%) Dr. Venier, Marta (20% Non-EPA) Dr. Zhu, Lingyan (5% Non-EPA) Dr. Hites, Ronald A. (5% Non-EPA) Dr. Ward, Cynthia R. (5% Non-EPA)	Pet Cats as Sentinels to Assess Health Risk Related to Exposure to Brominated Flame Retardants
		NHEERL	

	Nominations Recommended	(d) Total of 30	
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08HE 0033	(1) Tissue dosimetry, metabolism and excretion of pentavalent and trivalent monomethylated arsenic in mice after oral administration (2) Tissue dosimetry, metabolism and excretion of pentavalent and trivalent monomethylated arsenic in mice after oral administration	Dr. Hughes, Michael F. (30%) Dr. Adair, Blakely (20%) Dr. Kenyon, Elaina M. (10%) Dr. Thomas, David J. (5%) Dr. Creed, John T. (5%) Dr. Devesa, Vicenta (20% Non-EPA) Dr. Styblo, Miroslav (5% Non-EPA) Dr. Conklin, Sean (5% Non-EPA) NHEERL	Research in Determining the Disposition of Pentavalent and Trivalent Methylated Arsenicals in a Rodent Model
S08HE 0035	Pesticide loadings of select pyrethroid and organophosphate pesticides in urban public housing	Dr. Julien, Rhona (60%) Dr. Adamkiewicz, Gary (20% Non-EPA) Dr. Levy, Jonathan (10% Non-EPA Dr. Spengler, John (5% Non-EPA) Dr. Bennett, Deborah (3% Non-EPA) Dr. Nishioka, Marcia (2% Non-EPA) Region 1	Research Examining Possible Linkages between Exposures to Indoor Contaminants and Adverse Health Outcomes
S08HE 0042	Modeling population exposures to outdoor sources of hazardous air pollutants	Dr. Ozkaynak, Haluk (50%) Dr. Palma, Ted (30%) Dr. Thurman, James (15%) Dr. Touma, Jawad S. (5%) NERL	Demonstrating the Importance of Exposure-Modeling Methods in Conducting Air Pollution Health Research

	Nominations Recommended 1	for a Level III Award (Cont	'd) Total of 30
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08IR0 049	Impact of Underestimating the Effects of Cold Temperature on Motor Vehicle Start Emissions of Air Toxics in the United States	Dr. Cook, James Richard (20%) Dr. Fernandez, Antonio M. (10%) Dr. Brzezinski, David (10%) Dr. Thurman, James A. (10%) Dr. Strum, Madeleine L. (10%) Dr. Bailey, Chad R. (5%) Dr. Scarbro, Carl A. (5%) Dr. Baldauf, Richard W. (5%) Dr. Touma, Jawad S. (15% Non-EPA) Dr. Ensley, Darrell B. (10% NOn-EPA) NVFEL	Assessment of Impacts of an Uncharacterized Source of Vehicle Emissions, Leading to New Emission Standards
S08M M0053	Open burning of agricultural biomass: Physical and chemical properties of particle-phase emissions	Dr. Hays, Michael D. (50%) Dr. Geron, Christopher D. (10%) Dr. Gullett, Brian K. (10%) Dr. Fine, Philip M. (20% Non-EPA) Dr. Kleeman, Michael J. (10% Non-EPA) NRMRL	The Chemical and Physical Characterization of PM2.5 Emitted from Agricultural Burning
S08M M0056	Interlaboratory evaluation of "Hyalella azteca" and "Chironomus tentans" short-term and long-term sediment toxicity tests	Dr. Norberg-King, Teresa J. (40%) Dr. Mount, David (10%) Dr. Ireland, Scott (5%) Dr. Sibley, Paul K. (15% Non-EPA) Dr. Ingersoll, Christopher (15% Non-EPA) Dr. Kemble, Nile (5% Non-EPA) Dr. Burton, G. Allen (5% Non-EPA) Dr. Rowland, Carrie (5% Non-EPA)	Advancing the Use of Biological Test Methods as Monitoring Tools for Assessing Contaminated Sediments
		NHEERL	

	Nominations Recommended 1	for a Level III Award (Cont	'd) Total of 30
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08M M0057	(1) Effect of Single Wide Tires and Trailer Aerodynamics on Fuel	Dr. Bachman, L. Joseph (48%) Dr. Bynum, Cheryl (15%) Dr. Erb, Anthony (15%) Dr. Shoffner, Brent (10% Non-EPA) Dr. Ensfield, Carl (7% Non-EPA) Dr. De LaFuente, Hector Non-EPA) OAR	Providing Scientific Documentation of Emissions- Reduction Technologies That Pay for Themselves through Increased Fuel Efficiency
S08M M0070	(1) A null model for the expected macroinvertebrate assemblage in streams (2) Selecting discriminant function models for predicting the expected richness of aquatic macroinvertebrates (3) Exclusion of rare taxa affects performance of the O/E index in bioassessments	Dr. Van Sickle, John (75%) Dr. Larsen, D. P. (7%) Dr. Hawkins, C. P. (10% Non-EPA) Dr. Herlihy, A. T. (4% Non-EPA) Dr. Duff, D. D. (4% Non-EPA) NHEERL	Developing New Methods to Build and Evaluate Bioassessment Models of Species Assemblages in the Nation's Surface Waters
S08M M0073	Opportunistic Aspergillus Pathogens Measured in home and hospital tap water by Quantitative PCR (QPCR) TIMS # 182056	Dr. Vesper, Stephen J. (60%) Dr. Haugland, Richard A. (10%) Dr. Rogers, Melissa E. (20% Non-EPA) Dr. Neely, Alice N. (10% Non-EPA) NERL	Demonstrating a Rapid Method to Protect People from Exposure to Pathogenic Fungi in Drinking Water
S08OR 0074	Occurrence of Antibiotic-Resistant Urpathogenic "Escherichia coli" Clonal Group A in Wastewater Effluents	Dr. Boczek, Laura A. (50%) Dr. Rice, Eugene W. (35%) Dr. Johnson, James R. (10% Non-EPA) Dr. Johnston, Brian (5% Non-EPA) NRMRL	Research Showing the Significance of Antibiotic- Resistant Bacteria in Waste- Water, in Relation to Public Health

	Nominations Recommended 1	for a Level III Award (Cont	c'd) Total of 30
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08OR 0079	Characterization of Air Emissions and Residual Ash from Open Burning of Electronic Wastes during Simulated Rudimentary Recycling Operations	Dr. Gullett, Brian K. (40%) Dr. Linak, William P. (40%) Dr. Gatica, Staci (5%) Dr. Wasson, Shirley J. (5%) Dr. Touati, Abderrahmane (5% Non-EPA) Dr. King, Charles J. (5% Non-EPA)	Determining Emissions of Hazardous Substances from Rudimentary Electronic Waste Recycling Methods
		NRMRL	
S08OR 0083	Impact of Test Cycle and Biodiesel Concentration on Emissions	Dr. Sze, Chien (40%) Dr. Sobotowski, Rafal A. (20%) Dr. Whinihan, Joan K. (20%) Dr. Olson, Brian A. (10%) Dr. Schenk, Charles R. (10%) NVFEL	Enhancing the Understanding of Biodiesel Impact on Emissions and Developing New Correlation Factors to Predict NOx Emissions
S08OR 0086	(1) A Probabilistic Arsenic Exposure Assessment for Children Who Contact Chromated Copper Arsenate (CCA)- Treated Playsets and Decks, Part 1: Model Methodology, Variability Results, and Model Evaluation (2) A Probabilistic Arsenic Exposure Assessment for Children Who Contact Chromated Copper Arsenate (CCA)- Treated Playsets and Decks, Part 2: Sensitivity and Uncertainty Analyses	Dr. Zartarian, Valerie (30%) Dr. Xue, Jianping (30%) Dr. Ozkaynak, Haluk (20%) Dr. Dang, Winston (5%) Dr. Smith, Luther (5% Non-EPA) Dr. Glen, Graham (5% Non-EPA) Dr. Stallings, Casson (5% Non-EPA) NERL	Probabilistic Exposure Modeling Used in EPA's Risk Assessment of Children Contacting CCA-Treated Playsets and Decks
S08RA 0088	Critical Analysis of the Mathematical Relationships and Comprehensiveness of Life Cycle Impact Assessment Approaches	Dr. Bare, Jane C. (70%) Dr. Gloria, Thomas P. (30% Non-EPA) NRMRL	Providing LCIA Analysis and Developing Mathematical Relationships of Midpoint, Endpoint, Damage and Areas of Protection

^{*}Note: The percentages given after each name represent the current percent of the total level of effort as documented in the EPA nomination

	Nominations Recommended 1	or a Level III Award (Cont	t'd) Total of 30
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08RA 0091	A review of the mutagenicity and rodent carcinogenicity of ambient air	Dr. Claxton, Larry D. (70%) Dr. Woodall, Jr., George M (30%) NHEERL	Providing a Scholarly Review and Analysis of the Carcinogenicity and Mutagenicity of Urban Air
S08RA 0106	Toxicoproteomics and its application to human health risk assessment	Dr. Ge, Yue (70%) Dr. Preston, R. Julian (20%) Dr. Owen, Russell D. (10%) NHEERL	Reviewing the Role of Toxicoproteomics in Assessing Key Events in the Risk Assessment Process
S08RA 0107	Interactive effects of solar UV radiation and climate change on biogeochemical cycling	Dr. Zepp, Richard G. (50%) Dr. Paul, Nigel D. (17% Non-EPA) Dr. Sulzberger, Barbara (17% Non-EPA) Dr. Erickson, David J. (16% Non-EPA) NERL	Innovative Assessment of Current Research on the Effects of Ozone and Climate Changes on Biogeochemical Cycles
S08RM 0109	Enhanced Corrosion-Based Pd/Mg Bimetallic Systems for Dechlorination of PCBs	Dr. Al-Abed, Souhail (50%) Dr. Agarwal, Shirish (40% Non-EPA) Dr. Dionysiou, Dionysios (10% Non-EPA) NRMRL	Developing Bimetallic Particles for Reductive Dechlorination of Calcitrant Organic Contaminants in Sediments
S08TF0 120	Development and analysis of air quality modeling simulations for hazardous air pollutants	Dr. Luecken, Deborah (50%) Dr. Hutzell, William (40%) Dr. Gipson, Gerald (10%) NERL	Demonstrating the Capability to Predict Concentrations of Hazardous Air Pollutant Concentrations in the U.S.
S08TF0 121	predict volatile organic compound and	Dr. Mukerjee, Shaibal (25%) Dr. Gonzales, Melissa (15%) Dr. Neas, Lucas (10%) Dr. Norris, Gary (10%) Dr. Ozkaynak, Haluk (5%) Dr. Smith, Luther (20% Non-EPA) Dr. Stallings, Casson (15% Non-EPA)	Contributions in Monitoring and Modeling Traffic and Urban Air Pollution for Children's Health Studies
		NERL	
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	Nominations Recommended for a Level III Award (Cont'd) Total of 30			
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization	
S08TF0 128	(1) Analysis of Perfluorinated Carboxylic Acids in Soils: Detection and Quantitation Issues at Low Concentrations (2) Analysis of Perfluorinated Carboxylic Acids in Soils II: Optimization of Chromatography and Extraction	Dr. Washington, John W. (80%) Mrs. Ellington, J. Jackson (12%) Dr. Henderson, W. Matthew (3%) Dr. Jenkins, Thomas M. (3% Non-EPA) Dr. Evans, John J. (2% Non-EPA) NERL		
S08RA 0095	Assessing Susceptibility from Early- Life Exposure to Carcinogens	Dr. Barton, Hugh A. (20%) Dr. Flowers, Lynn (20%) Dr. Setzer, Woodrow (20%) Dr. Woodruff, Tracey (20%) Dr. Cogliano, V. James (10%) Dr. Valcovic, Larry (10%) NCEA	Analysis of the Risk Assessment Implications of Early-Life Exposure to Carcinogens Considering Mode of Action	

^{*}Note: The percentages given after each name represent the current percent of the total level of effort as documented in the EPA nomination

Nom.	Titles and Citations of Submitted	Authors* and Nominating	Suggested Citation from
- 10444	Papers	Organization	Nominating Organization
S08CS0 002	XAS and XPS Characterization of Mercury Binding on Brominated Activated Carbon	Dr. Hutson, Nick (40%) Dr. Scheckel, Kirk (30%) Dr. Attwood, Brian (30% Non EPA) NRMRL	Studies That Provide a Fundamental Understanding of the Binding of Mercury to Brominated Activated Carbon
S08CS0 003	Iron Optimization for Fenton-Driven Oxidation of MTBE-Spent Granular Activated Carbon	Dr. Huling, Scott G. (80%) Dr. Jones, P. Kyle (10%) Dr. Lee, Tony (10%) NRMRL	Process Diagnostics and Treatment Optimization in Chemical Regeneration of Activated Carbon
S08CS0 004	Optimizing Arsenic Removal During Iron Removal: Theoretical and Practical Considerations	Dr. Lytle, Darren A. (70%) Dr. Sorg, Thomas (25%) Dr. Snoeyink, Vernon (5% Non-EPA) NRMRL	The Optimization of Arsenic Removal from Drinking Water During Iron Removal
S08ER 0019	An Approach to Predict Risks to Wildlife Populations from Mercury and Other Stressors	Dr. Nacci, Diane (20%) Dr. Pelletier, Marguerite (10%) Dr. Bennett, Rick (10%) Dr. Grear, Jason (10%) Dr. Kuhn, Anne (10%) Dr. Walters, Steven (10%) Dr. Lake, Jim (5%) Dr. Nichols, John (5%) Dr. Nichols, John (5%) Dr. Nicholson, Matthew (5%) Dr. Munns, Jr., Wayne R. (5%) Dr. Copeland, Jane (5% Non-EPA)	An Integrative, Transparent Process Developed to Address the Need to Assess Complex, Population-Level Eco Risks

Nominations Recommended for Honorable Mention (No Monetary Award) --- Total of 43

	Titles and Citations of Submitted	ended for Honorable Mention (No Monetary Award) Total of 43 tions of Submitted Authors* and Nominating Suggested Citation	
Nom.	Papers	Organization	Suggested Citation from Nominating Organization
	-		
S08CS0 006	 (1) Revisiting Nucleophilic Substitution Reactions: Microwave-Assisted Synthesis of Azides, Thiocyanates, and Sulfones in an Aqueous Medium (2) Aqueous N-Heterocyclization of 	Dr. Varma, Rajender S. (50%) Dr. Ju, Yuhong (35% Non- EPA) Dr. Kumar, Dalip (15% Non- EPA)	Exceptional Technical Achievement in Developing a Microwave Technology for Greener Chemical Synthesis in Water
Linked	Primary Amines and Hydrazines with Dihalides: Microwave-Assisted Syntheses of N-Azacycloalkanes, Isoindole, Pyrazole, Pyrazolidine, and Phthalazine Derivatives		
with	(3) Clean Chemical Synthesis in Water	NRMRL	
S08EF0 008	(1) Solvent-free Facile Synthesis of Novel Alpha-Tosyloxy Beta-Keto Sulfones Using [Hydroxy(tosyloxy) iodo]benzene	Dr. Varma, Rajender S. (65%) Dr. Kumar, Dalip (35% Non- EPA)	Achievement in Advancing Emerging Alternative Technologies for Greener
	(2) Greener Organic Syntheses Under Non-Traditional Conditions		Chemical Processing
	(3) 'Greener' Chemical Synthetic Processes Using Enzymatic, Mechanochemical Mixing or Microwave- and Ultrasound Irradiation	NRMRL	
&			
S08OR 0084	(1) Green Approach to Bulk and Template-free Synthesis of Thermally Stable Reduced Polyaniline Nanofibers for Capacitor Applications (2) Nanosized Magnesium Oxide as Catalyst for the Rapid and Green	Dr. Varma, Rajender S. (50%) Dr. Kumar, Dalip (35% Non- EPA) Dr. Nadagouda, Mallikarjuna N. (15% Non-EPA)	Exceptional Technical Achievement in Green Synthesis of Nanofibers for Capacitor Applications and Chemical Catalysis
	Synthesis of Substituted 2-Amino-2- Chromenes	NRMRL	enement enumy sus
& S08TF0 127	(1) Preparation of Novel Metallic and Bimetallic Cross-Linked Poly (vinyl alcohol) Nanocomposites Under Microwave Irradiation	Dr. Varma, Rajender S. (50%) Dr. Nadagouda, Mallikarjuna N. (50% Non-EPA)	Exceptional Technical Achievement in the Synthesis of Green Nanocomposites Comprising Nanometals and
	(2) Microwave-Assisted Synthesis of Crosslinked Poly (vinyl alcohol) Nanocomposites Comprising Single- Walled Carbon Nanotubes, Multi-Walled Carbon Nanotubes, and Buckminsterfullerene	NRMRL	Comprising Nanometals and Carbon Nanotubes

Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08HE 0028	The cyanobacterial toxin, cylindrospermopsin, induces fetal toxicity in the mouse after exposure late in gestation	Dr. Chernoff, Neil (48%) Dr. Rogers, Ellen H. (47%) Dr. Zehr, R. Daniel (1% Non-EPA) Dr. Gage, Michael I. (1% Non-EPA) Dr. Humpage, Andrew R. (1% Non-EPA) Dr. Falconer, Ian R. (1% Non-EPA) Dr. Marr, Melissa C. (1% Non-EPA)	Research on the Unusual Developmental/Maternal Toxicity of a Hazardous, Environmentally Relevant Cyanobacterial Toxin
		NHEERL	
S08HE 0036	The Spontaneously Hypertensive Rat: An Experimental Model of Sulfur Dioxide-Induced Airways Disease	Dr. Kodavanti, Urmila P. (25%) Dr. Schladweiler, Mette C. (10%) Dr. Ledbetter, Allen D. (10%) Dr. Richards, Judy (5%) Dr. Jaskot, Richard H. (5%) Dr. Karoly, Edward (5%) Dr. Costa, Daniel L. (5%) Dr. Evansky, Paul (5%) Dr. Pinkerton, Kent E. (5% Non-EPA) Dr. Gilmour, Peter S. (5% Non-EPA) Dr. Thomas, Ronald (5% Non-EPA) Dr. Huang, Yuh-Chin T. (5% Non-EPA) Dr. Ortuno, Roselia Villalobos (5% Non-EPA) Dr. Suffia, Marie (5% Non-EPA) NHEERL	Development of an Experimental Animal Model of Human Chronic Pulmonary Disease
S08HE 0039	Using IFN-y as a Biomarker for Detecting Exposure to Viral Pathogens	Dr. Li, Lu (80%) Dr. Dufour, Alfred P. (20%) NERL	Using IFN-Gamma as a Biomarker to Detect Exposure to Viral Pathogens

Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08HE 0043	Improved Estimates on Cancer Site- Specific Risks for A-Bomb Survivors	Dr. Pawel, David J. (55%) Dr. Preston, Dale L. (20% Non-EPA) Dr. Pierce, Don (20% Non-EPA) Dr. Cologne, John (5% Non-EPA)	An Outstanding Paper of Radiation Risk Estimates for Specific Types of Cancer
		OAR	
S08HE 0044	Exposure reconstruction for reducing uncertainty in risk assessment: Example using MTBE biomarkers and a simple pharmacokinetic model	Dr. Pleil, Joachim D. (70%) Dr. Prah, James D. (10%) Dr. Kim, David (10% Non-EPA) Dr. Rappaport, Stephen (10% Non-EPA)	Innovative Use of Human Biomarker Measurements in Exposure Reconstruction with Classical Pharmacokinetic Modeling
		NERL	
S08HE 0046	Estimating Risk from Ambient Concentrations of Acrolein across the United States	Dr. Woodruff, Tracey J. (25%) Dr. Wells, Ellen M. (25%) Dr. Holt, Elizabeth W. (20%) Dr. Axelrad, Daniel A. (20%) Dr. Burgin, Deborah E. (10%) OA	Developing and Demonstrating Methods for Noncancer Risk Assessment of Acrolein
S08IR0 047	(1) Incorporating results of avian toxicity tests into a model of annual reproductive success	Dr. Bennett, Richard S. (50%) Dr. Etterson, Matthew A. (50%)	Developing a Modeling Approach for Improving Estimates of Contaminant Effects on Avian Reproductive
	(2) Estimating pesticide effects on fecundity rates of wild birds using current laboratory reproduction tests		Success
	(3) On the use of published demographic data for population-level risk assessment in birds	NHEERL	

Nominations Recommended for Honorable Mention (No Monetary Award) Total of 43				
Titles and Citations of Submitted Paners	Authors* and Nominating	Suggested Citation from Nominating Organization		
(1) Economics and Ecological Risk Assessment: Applications to Watershed Management. Chapter 1. Introduction (2) Chapter 9. Conceptual Approach for Integrated Watershed Management	Dr. Bruins, Randall J. F. (50%) Dr. Heberling, Matthew T. (45%) Dr. Maddock, Tara A. (5%)	Research That Demonstrates How Ecology and Economics Can Be Integrated to Improve the Management of Watersheds		
(3) Chapter 16. Conclusions	IVERE			
(1) Quantification of fluorotelomer-based chemicals in mammalian matrices by monitoring perfluoroalkyl chain fragments with GC/MS (2) Perfluorooctanoic Acid and Perfluorononanoic Acid in Fetal and Neonatal Mice Following in Utero Exposure to 8-2 Fluorotelomer Alcohol	Dr. Henderson, W. Matthew (80%) Dr. Weber, Eric J. (5%) Dr. Duirk, Stephen E. (5%) Dr. Washington, John W. (5%) Dr. Smith, Mary Alice (5% Non-EPA)	Developing Methods to Enhance the Analysis of Perfluorinated Chemicals in Mammalian Systems		
	NERL			
Towards quantitative uncertainty assessment for cancer risks: central estimates and probability distributions of risk in dose-response modeling	Dr. Kopylev, Leonid (34%) Dr. Chen, Chao (33%) Dr. White, Paul (33%) NCEA	Developing a Statistical Methodology That Provides Probability Distributions and Stable Central Estimates of Risk		
Environmental Contaminant trans-	(22%)	Providing Critical Metabolism Data Needed for Risk Assessment of Conazole Compounds		
	(1) Economics and Ecological Risk Assessment: Applications to Watershed Management. Chapter 1. Introduction (2) Chapter 9. Conceptual Approach for Integrated Watershed Management (3) Chapter 16. Conclusions (1) Quantification of fluorotelomer-based chemicals in mammalian matrices by monitoring perfluoroalkyl chain fragments with GC/MS (2) Perfluorooctanoic Acid and Perfluorononanoic Acid in Fetal and Neonatal Mice Following in Utero Exposure to 8-2 Fluorotelomer Alcohol Towards quantitative uncertainty assessment for cancer risks: central estimates and probability distributions of risk in dose-response modeling In Vitro Metabolism of the Fungicide and Environmental Contaminant trans- bromuconazole and Implications for Risk	Companies and Ecological Risk Assessment: Applications to Watershed Management. Chapter 1. Introduction Dr. Heberling, Matthew T. (45%) Dr. Maddock, Tara A. (5%) NERL Dr. Henderson, W. Matthew (80%) Dr. Weber, Eric J. (5%) Dr. Weber, Eric J. (5%) Dr. Washington, John W. (5%) Dr. Smith, Mary Alice (5%) Dr. Smith, Mary Alice (5%) Non-EPA) Dr. Chen, Chao (33%) Dr. Chen, Chao (33%) Dr. Wetabolism of the Fungicide and Environmental Contaminant transbromuconazole and Implications for Risk Assessment Assessment Assessment Dr. Mazur, Christopher S. (22%) Dr. Lipscomb, John C. (22%) Dr. Lipscomb, John C. (22%) Dr. Dkino, Miles (12%) Dr. Okino, Miles (12%) Dr. Okino, Miles (12%)		

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 43 Nom. Titles and Citations of Submitted **Authors* and Nominating** Suggested Citation from Nominating Organization **Papers** Organization (1) Quantification and Associated Dr. Biales, Adam (35%) S08M Work Which Aided States and Dr. Bencic, David C. (25%) Variability of Induced Vitellogenin Gene M0058 US EPA Regional Laboratories Transcripts in Fathead Minnow Dr. Lattier, David L. (15%) in Estrogenic Exposure ("Pimephales promelas") by Quantitative Dr. Flick, Robert W. (15%) Assessments of Aquatic Real-Time Polymerase Chain Reaction Dr. Lazorchak, Jim L. (10%) Ecosystems Assay (2) A Quantitative Real-Time Polymerase Chain Reaction Method for the Analysis of Vitellogenin Transcripts in Model and Nonmodel Fish Species NERL S08M Chemical markers of human waste Dr. Jones-Lepp, Tammy L. Providing Public Authorities M0063 contamination: Analysis of urobilin and (100%)Analytical Tools to Accurately pharmaceuticals in source waters Measure Markers of Human Sewage in the Nation's Waters NERL S08M Characterization of Fine Particle and Dr. Kinsey, John S. (55%) The First Study to Quantify the M0064 Gaseous Emissions during School Bus Dr. Dong, Yuanji (25% Non-Benefits of Diesel School Bus Anti-Idling Idling Dr. Williams, David C. (15% Non-EPA) Dr. Logan, Russell (5% Non-EPA) NRMRL S08M A Diurnal Reflectance Model Using Dr. Shirazi, Mostafa A. (80%) Developing a New Method of M0069 Grass: Surface-Subsurface Interaction Remote Sensing Applicable to Dr. Reporter, Minocher (20% Integrated Agronomy, Soil, and and Inversion Non-EPA) Landscape Research NHEERL S08OR Reference Values for Exposure to PAH Dr. Cormier, Susan M. (50%) Advancing the Application of 0076 Contaminants: Comparison of Fish from Dr. Lin, Luan-Ho C. (50%) Environmental Ohio and Mid-Atlantic Streams Epidemiological Approaches for Environmental Protection NCEA

Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08OR 0077	(1) The development of a matrix-assisted laser desorption/ionization mass spectrometry-based method for the protein fingerprinting and identification of "Aeromonas" species using whole cells (2) Differentiation of "Aeromonas" Isolated from Drinking Water Distribution Systems Using Matrix-Assisted Laser Desorption/Ionization-Mass Spectrometry	Dr. Donohue, Maura J. (25%) Dr. Shoemaker, Jody A. (20%) Dr. Rodgers, Mark R. (10%) Dr. Pfaller, Stacy L. (10%) Dr. Best, Jennifer A. (10%) Dr. Kostich, Mitchell S. (10%) Dr. Smallwood, Anthony Wayne (15% Non-EPA) NERL	Development and Application of a MALDI-MS Technique to Identify and Speciate "Aeromonas" Isolates in Drinking Water
S08OR 0081	Emissions from Cooking Microwave Popcorn	Dr. Rosati, Jacky A. (60%) Dr. Krebs, Kenneth A. (35%) Dr. Liu, Xiaoyu (5% Non-EPA) NHSRC	Innovative Research into the Chemicals Emitted While Cooking Microwave Popcorn
S08OR 0082	Comparison of (85)Kr and (3)H Apparent Ground-Water Ages for Source Water Vulnerability in the Collyer River Catchment, Maine	Dr. Sidle, William C. (100%) NRMRL	Field Development and Application of (85)Kr to Replace Tritium as a Practical Age-Dating Tool to Map Watersheds
S08OR 0085	A graphical systems model to facilitate hypothesis-driven ecotoxicogenomics research on the teleost brain-pituitary-gonadal axis	Dr. Villeneuve, Daniel L. (45%) Dr. Ankley, Gerald T. (10%) Dr. Knoebl, Iris (5%) Dr. Kahl, Michael D. (5%) Dr. Jensen, Kathleen M. (5%) Dr. Makynen, Elizabeth A. (5%) Dr. Durhan, Elizabeth J. (5%) Dr. Miracle, Ann L. (5% Non-EPA) Dr. Carter, Barbara J. (5% Non-EPA) Dr. Denslow, Nancy D. (5% Non-EPA) Dr. Larkin, Patrick (5% Non-EPA)	Development of a Graphical Framework for Understanding and Predicting Impacts of Stressors on Fish Reproduction

Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08RA 0089	Neurodegenerative Diseases: An Overview of Environmental Risk Factors	Dr. Brown, Rebecca C. (60%) Dr. Sonawane, Babasaheb R. (25%) Dr. Lockwood, Alan H. (15%) Non-EPA)	An Outstanding Review of Environmental Risk Factors for Neurodegenerative Diseases and Recognition of Research Needs
		NCEA	
S08RA 0096	Pharmaceuticals and personal care products in biosolids/sewage sludge: the interface between analytical chemistry and regulation	Dr. Jones-Lepp, Tammy L. (50%) Dr. Stevens, Rick (50%) NERL	Contributing to the Body of Knowledge Regarding Biosolids: Their Characterization and Regulatory Practices
S08RA 0094	Immunoassays and Other Bioanalytical Techniques: Chapter 1. Integrating Bioanalytical Capability in an Environmental Analytical Laboratory	Dr. Van Emon, Jeanette M. (60%) Dr. Chuang, Jane C. (25% Non-EPA) Dr. Trejo, Raquel M. (10% Non-EPA) Dr. Durnford, Joyce (5% Non-EPA) NERL	Development of a Reference Work Environmental on Immunochemical Techniques
S08RA 0099	Receptor modeling of ambient particulate matter data using positive matrix factorization: Review of existing methods	Dr. Eberly, Shelly (20%)	Reviewing and Synthesizing Methods of Receptor Models Used in the Study of Air Pollution
S08RA 0101	Water Analysis: Emerging Contaminants and Current Issues	Dr. Richardson, Susan D. (100%)	Providing a Critical Review on Analytical Methods and Measurements of Emerging
		NERL	Contaminants in Environmental Waters
S08RA 0103	Removing Esoteric Contaminants from Drinking Waters: Impacts of Treatment Implementation	Dr. Speth, Thomas F. (60%) Dr. Schock, Michael R. (40%) NRMRL	Exploring the Possible

Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08RA 0105	Waterborne pathogens in urban watersheds	Dr. Arnone, Russell D. (50%) Dr. Walling, Joyce M. (50%) NRMRL	Their Contribution to the Study of Microbial Contaminants in Watersheds and the Field of
S08RA 0135	(1) In vitro-in vivo extrapolation of quantitative hepatic biotransformation data for fish. I. A review of methods, and strategies for incorporating intrinsic clearance estimates into chemical kinetic models (2) A compilation of vitro rate and affinity values for xenobiotic biotransformation in fish, measured under physiological conditions (3) In vitro-in vivo extrapolation of quantitative hepatic biotransformation data for fish. II. Modeled effects on chemical bioaccumulation	Dr. Nichols, John W. (55%) Dr. Fitzsimmons, Patrick N. (20%) Dr. Burkhard, Lawrence P. (10%) Dr. Lien, Gregory J. (5%) Dr. Schultz, Irvin R. (10% Non-EPA)	Watershed Management Improved Prediction of Metabolism Impacts on Chemical Bioaccumulation in Fish
S08RM 0108	Partitioning, Desorption, and Dechlorination of a PCB Congener in Sediment Slurry Supernatants	Dr. Al-Abed, Souhail (70%) Dr. Fang, Yuanxiang (James) (30% Non-EPA) NRMRL	Revealing Relationships between Its Partitioning, Desorption, and Dechlorination of PCBs in Contaminated Sediments
S08RM 0112	Arsenic Release from Iron Rich Mineral Processing Waste: Influence of pH and Redox Potential	Dr. Al-Abed, Souhail (50%) Dr. Allen, Derrick (10%) Dr. Jegadeesan, Gautham (20% Non-EPA) Dr. Purandare, Jaydeep (20% Non-EPA) NRMRL	Highlighting the Effects of Geochemical Variables on the Leaching of Metals in Landfills and Disposal Sites
S08RM 0113	 (1) Use of Granular Graphite for Electrolytic Dechlorination of Trichloroethylene (2) Modeling the Electrolytic Dechlorination of Trichloroethylene in a Granular Graphite-Packed Reactor 	Dr. Al-Abed, Souhail (70%) Dr. Fang, Yuanxiang (James) (30% Non-EPA) NRMRL	First Use of Graphite Electrodes Successfully to Dechlorinate Toxic Chlorinated Solvents in Water and Soil

Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization
S08SS0 115	Personal Values, Beliefs, and Ecological Risk Perception	Dr. Slimak, Michael W. (75%) Dr. Thomas, Dietz (25% Non-EPA)	Advancing Our Understanding of How Our Own Personal Views and Beliefs Affect Our Perception of Ecological Risk
S08TF0 117	Calculating Physical Properties Of Organic Compounds For Environmental Modeling From Molecular Structure	NCEA Dr. Hilal, Said (65%) Dr. Whiteside, Tad S. (15% Non-EPA) Dr. Saravanaraj, A. N. (10% Non-EPA) Dr. Carreira, L. A. (10% Non-EPA) NERL	Predicting Environmental Fate of Organic Compounds Using SPARC Property Estimations
S08TF0 122	Relative congener scaling of polychlorinated dibenzo-p-dioxins and dibenzofurans to estimate building fire contributions in air, surface wipes, and dust samples	Dr. Pleil, Joachim D. (60%) Dr. Lorber, Matthew N. (40%) NERL	Novel Variable Clustering and Multivariate Regression Analysis of Complex Environmental Dioxin Data from WTC
S08TF0 123	Modeling the effect of chlorine emissions on ozone levels over the eastern United States	Dr. Sarwar, Golam (75%) Bhave, Prakash (25%) NERL	Evaluating the Effects of Chlorine Emissions and Chemistry on Ozone in the Lower Atmosphere
S08TF0 125	Zero-Valent Iron Reactive Materials for Hazardous Waste and Inorganics Removal: Chapter 8. Utilization of Zero- valent Iron for Arsenic Removal from Groundwater and Wastewater	Dr. Su, Chunming (100%) NRMRL	Invited Review of the State-of- the-Art of Groundwater and Wastewater Arsenic Remediation
S08TF0 126	(1) Removal of added nitrate in cotton burr compost, mulch compost, and peal: Mechanisms and potential use for groundwater nitrate remediation (2) Removal of added nitrate in the single, binary, and ternary systems of cotton burr compost, zerovalent iron, and sediment: Implications for groundwater nitrate remediation using permeable reactive barriers	Dr. Su, Chunming (75%) Dr. Puls, Robert W. (25%) NRMRL	Systematic Research on Cost- Effectively and Efficiently Removing Groundwater Nitrate Using Agricultural By- Products

Nominations Recommended for Honorable Mention (No Monetary Award) Total of 43				
Nom.	Titles and Citations of Submitted Papers	Authors* and Nominating Organization	Suggested Citation from Nominating Organization	
	Formation of Pb(IV) Oxides in Chlorinated Water	Dr. Lytle, Darren A. (65%) Dr. Schock, Michael R. (35%) NRMRL	The Impact of Water Chemistry on the Transformation of Pb(II) to Pb(IV) in Chlorinated Water	
			r o(r v) in omornated water	

^{*}Note: The percentages given after each name represent the current percent of the total level of effort as documented in the EPA nomination

Key to Acronyms used in the above Tables

NCCT - National Center for Computational Toxicology

NCEA - National Center for Environmental Research

NERL - National Exposure Research Laboratory

NHEERL - National Health and Environmental Effects Laboratory

NHSRC - National Homeland Security Research Center

NRMRL - National Risk Management Research Laboratory

NVFEL - National Vehicle and Fuel Emissions Laboratory

OA - Office of the Administrator

OAR - Office of Air and Radiation

OPPT - Office of Pollution Prevention and Toxics

OSP- Office of Science Policy

OTAQ - Office of Transportation and Air Quality