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

OFFICE OF THE ADMINISTRATOR
SCIENCE ADVISORY BOARD

January 10, 2008

EPA-SAB-08-005

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

Subject: SAB Report of FY2007 Recommended Scientific and Technological Achievement Awards (STAA)

Dear Administrator Johnson:

We are pleased to recommend papers published in the peer-reviewed literature for the 2007 Scientific and Technological Achievement Awards. Of 140 nominations, the Committee found 55 worthy of awards and another 45 deserving honorable mention. Of the papers recommended for awards, five were recommended for the highest award -- Level I, thirteen for Level II awards, and thirty-seven for Level III awards.

The SAB recommends the Agency evaluate the current administrative procedures for the STAA program to: a) incorporate directly into STAA submission instructions ethical guidelines on the equity of authorship for nominated papers and b) increase the number of topical categories into which papers may be classified, a recommendation that has been made previously. The SAB applauds the Agency on its decision to increase the monetary awards for levels I, II and III and commends the move to electronic submission of nominations, both of which were previous recommendations of the SAB.

Thank you for providing us with the opportunity to assist the Agency with this important program.

Sincerely,

/Signed/

Dr. Granger Morgan, Chair
EPA Science Advisory Board

/Signed/

Dr. Thomas L. Theis, Chair
Scientific and Technological Achievement Awards Committee (FY2006-2009)
EPA Science Advisory Board

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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 employees, fostering a greater exposure of EPA research to the public. 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 U.S. Environmental Protection Agency's Science Advisory Board regarding the FY 2006 EPA Scientific and Technological Achievement.

At a closed meeting on August 13-15, 2007, the SAB STAA Awards Committee reviewed and evaluated 144 papers nominated for FY2006. The Committee reduced the total number eligible for awards to 140 because some papers were deemed to be of a very similar nature (these papers are identified in Table 2 and Appendix A). The topical categories were: Control Systems & Technology (CS), Environmental Futures (EF), Ecological Research (ER), Environmental Statistics (ES), 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 55 nominations for awards (39 percent of the nominations), and also identified an additional 45 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 improves the credibility of Agency decisions on important scientific issues of specific importance to EPA.

This year, the Committee identified two issues that warrant a careful review of the current administrative procedure to ensure the scientific equity, thoroughness, and efficiency of the award process. First, the Committee suggests that the requirement for written agreements among authors for certification of authorship be rescinded, and that the Agency provide ethical guidelines on authorship as part of the application process. Second, it is reiterated that the number of topical categories into which papers may be classified be increased to reflect the changing nature of environmental research and to make the classification process simpler

The Committee commends the Agency for initiating an electronic submission and review process for the 2007 STAA program and applauds the increase in monetary awards in accord with previous recommendations from STAA committees.

Overall, the Committee 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. PROCEDURE

In 2007, the EPA Science Advisory Board convened a Committee to review and evaluate scientific and technological papers published in peer-reviewed journals by EPA authors and nominated for the FY 2006 Scientific and Technological Achievement Awards (STAA) program. The Committee was formed 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).

The Office of Research and Development (ORD) nominated 140 papers to the STAA program. ORD grouped the papers into twelve science and technology categories and screened the papers for conformance with the nomination guidelines. The Committee used the *2005 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. ORD requested the SAB consider whether the nominations qualified for each level of award. As defined by the Agency, these are:

a) Level I awards - are for nominees who have accomplished an exceptionally high-quality research or technological effort. The nomination should recognize the creation or general revision of a scientific or technological principle or procedure, or a highly significant improvement in the value of a device, activity, program, or service to the public. It must be at least of national significance or have 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) Level II awards - are for nominees who have accomplished a notably excellent research or technological effort that has qualities and values similar to, but to a lesser degree, than those described under Level I. It must have timely consequences and contribute as an important scientific/technological achievement within its discipline or field of study.

c) Level III awards - 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) Honorable Mention - 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 August 13-15, 2007 in Washington, DC. This meeting was closed to the public to protect the personal privacy of the authors. All 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, 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.

When the Board considered the Committee's report for approval prior to transmittal to the Agency, it reviewed the Committee report without Appendix A which identifies the award recommendations.

3. RECOMMENDATIONS

3.1 Review Recommendations

Table 1 summarizes the Level I and Level II awards by year since 1998, including the recommendations for 2007. The awards criteria for 2006 remained the same as the previous year.

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

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

Table 2 summarizes the distribution of award recommendations for 2007 among categories. Of 140 initial nominations, the Committee recommended 55 for an award and 45 for honorable mention**.**

TABLE 2
Summary Number of Award Recommendations By Category For FY2007

Nomination Categories	Total Nom.	Award Levels				Award %	Hon. Men.
		I	II	III	Tot		
Control Systems & Technology (CS)	6*	0	1	3	4	67	0
Ecological Research (ER)	26**	0	6	4	10	38	8
Environmental Statistics (ES)	4	0	0	1	1	25	3
Health Effects Research and Human Health Risk Assessment (HE)	21	2	1	10	13	62	6
Integrated Risk Assessment (IR)	2	0	0	0	0	0	1
Monitoring and Measurement Methods (MM**)**	21***	0	2	2	4	19	8
Review Articles (RA)	21	1	0	8	9	43	3
Risk Management & Ecosystem Restoration (RM**)**	4	0	0	0	0	0	1
Social Sciences (SS)	1***	0	0	0	0	0	0
Transport and Fate (TF)	15	1	0	8	9	60	5
Environmental Futures (EF)	5	1	1	0	2	40	3
Other Environmental Research (OR)	14*	0	2	1	3	21	7
TOTALS:	**140**	**5**	**13**	**37**	**55**	39	**45**

* S7CS0003, S7CS0004, and S7OR0090 were combined by the Committee for one Level III award.
**S7ER0023 and S7ER0024 were combined by the Committee for one Level II award
*** S7MM0144 and S7SS0143 were combined by the Committee for one Level II award

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

3.2 Administrative Recommendations

The Committee has three comments regarding the STAA process.

1. The FY 2007 Committee notes with gratitude the implementation of two recommendations of this and previous committees: the submission and distributions of nominations electronically, and increases in the monetary amounts in each award category.

2. The Committee notes the addition of one topical category for 2007 nominations, "Other Research", bringing the total to twelve. Still the Committee continues to believe that additional, more definitive, categories are warranted, both because of the need for clarity in categorical definitions, and the concern that some authors may not submit their work because of the perception that it does not align with award criteria. The Committee recognizes that environmental research can be subdivided into many categories and does not suggest that research and scholarly categories should be "author-defined" or that an unbounded list be compiled. However the Committee does recommend that certain major categories should be added, among them:

    - Sustainability/Life Cycle Analysis/Industrial Ecology/Green Chemistry
    - Economics and Decision Sciences
    - Transportation/The Urban Environment/Land-Use Planning
    - Environmental Justice
    - Homeland Security
    - Environmental Policy
    - Energy and the Environment

Appendix A - Nominations Recommended for Awards

FY2007 Scientific and Technological Achievement Awards (STAA)

Nominations Recommended for a Level I Award -- Total of 5			
Nom.	**Titles and Citations of Submitted Papers**	**Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7EF0010	Improving National Air Quality Forecasts with Satellite Aerosol Observations	Dr. Szykman, James (25%) Dr. Weinstock, Lewis (16%) Dr. Wayland, Richard (5%) Dr. Dimmick, Fred (5%) Dr. Al-Saadi, Jassim (25% Non-EPA) Dr. Pierce, R. Bradley (5% Non-EPA) Dr. Kittaka, Chieko (5% Non-EPA) Dr. Neil, Doreen (2% Non-EPA) Dr. Chu, Allen (2% Non-EPA) Dr. Remer, Lorraine (2% Non-EPA) Dr. Gumley, Liam (2% Non-EPA) Dr. Prins, Elaine (2% Non-EPA) Dr. MacDonald, Clinton (2% Non-EPA) Dr. Fishman, Jack (2% Non-EPA) NERL	Developing an Operational Fine Particulate Matter (PM2.5) Air Quality Index Forecast Tool to Improve Public Awareness
S7HE0048	(1)Toxicokinetics of BDE 47 in Female Mice: Effect of Dose, Route of Exposure, and Time (2) Impact of Repeated Exposure on the Toxicokinetics of BDE 47 in Mice (3) Disposition of BDE 47 in Developing Mice	Dr. Birnbaum, Linda S. (30%) Dr. Diliberto, Janet J. (25%) Dr. DeVito, Michael J. (5%) Dr. Staskal, Daniele S. (40% Non-EPA) NHEERL	Pharmacokinetics of Polybrominated Diphenyl Ether (PDE) 47 in Mice
**Note: The percentages given after name represent the current percent of the total level of effort as documented in the EPA nomination*			

Nominations Recommended for a Level I Award (Cont'd) -- Total of 5			
Nom.	**Titles and Citations of Submitted Papers**	**Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7HE0053	(1)Continuous Weeklong Measurements of Personal Exposures and Indoor Concentrations of Fine Particles for 37 Health-Impaired North Caolina Residents for up to Four Seasons (2) Use of Personal-Indoor-Outdoor Sulfur Concentrations to Estimate the Infiltration Factor and Outdoor Exposure Factor for Individual Homes and Persons (3) Validation of a Method for Estimating Long-Term Exposures Based on Short-Term Measurements	Dr. Williams, Ron (35%) Dr. Wallace, Lance (35%) Dr. Croghan, Carry (15%) Dr. Rea, Anne (15%) NERL	Demonstrating how Activity Patterns and Environmental Factors Impact Human Exposures to Ambient Particulate Matter
S7RA0140	Hydrological Connectivity between Headwater Streams and Downstream Waters: How Science can Inform Policy	Dr. Nadeau, Tracie-Lynn (60%) Dr. Rains, Mark C. (40% Non-EPA) OWOW	Advancing the Scientific Understanding of the Contributions of Headwater Streams to the Integrity of Downstream Waters
S7TF0132	Groundwater N Speciation and Redox Control of Organic N Mineralization by O2 Reduction to H2O2	Dr. Washington, John W. (80%) Dr. Thomas, Robert C. (5%) Dr. Endale, Dinku M. (5% Non-EPA) Dr. Schroer, Katherine L. (5% Non-EPA) Dr. Samarkina, Lidia P. (5% Non-EPA) NERL	Elucidating Basic Controls on Transformations of Aquatic Norgs Essential Knowledge for Addressing Eutrophication
**Note: The percentages given after name represent the current percent of the total level of effort as documented in the EPA nomination*			

Nominations Recommended for a Level II Award -- Total of 13			
Nom.	**Titles and Citations of Submitted Papers**	**Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7CS0005	Control of Mercury Emissions from Coal-Fired Electric Utility Boilers	Dr. Srivastava, Ravi K. (35%) Dr. Hutson, Nick D. (25%) Dr. Princiotta, Frank T. (20%) Dr. Martin, G. Blair (10%) Dr. Staudt, James E. (10% Non-EPA) NRMRL	Providing the Public with a Comprehensive Summary of Technologies for Control of Mercury Emissions from Electric Utility Boilers
S7EF0007	(1) Chemical Structure Indexing of Toxicity Data on the Internet: Moving towards a Flat World (2) Future of Predictive Toxicology: An Expanded View of "Chemical Toxicity"	Dr. Richard, Ann M. (80%) Dr. Gold, Lois S. (10% Non-EPA) Dr. Nicklaus, Marc C. (10% Non-EPA) NCCT	New Paradigm of Cheminformatics, Data Models, and High-Throughpur Resting for Toxicity Prioritizing in EPA
S7ER0013	Biogenic Volatile Organic Compound Emissions from Desert Vegetation of the Southwestern U.S.	Dr. Geron, Chris D. (80%) Dr. Guenther, Alex (10% Non-EPA) Dr. Greenberg, Jim (5% Non-EPA) Dr. Karl, Thomas (3% Non-EPA) Dr. Rasmussen, Rei (2% Non-EPA) NRMRL	Research on Arid Land Natural Oxidant and Organic Aerosol Precursor Compounds
S7OR0085	(1) Global Transcriptome Analysis of Staphylococcus Aureus Response to Hydrogen Peroxide (2) Toxicogenomic Response of Staphylococcus Aureus to Peracetic Acid (3) The Microarray Analysis of Psedudomonas Aeruginosa Induction of Pyocin in Response to Hydrogen Peroxide	Dr. Toghrol, Freshteh (50%) Dr. Chang, Wook (30% Non-EPA) Dr. Small, David A. (10% Non-EPA) Dr. Bentley, William E. (10% Non-EPA)	Leadership in Advancing the Scientific Understanding of Pathogen behavior Against Antimicrobial Agents at the Genomic Level and for Research Extending the Agency's Genomic Capabilities to Microbial Pathogens

Nominations Recommended for a Level II Award -- Total of 13			
S7OR0088	Use of Competitive DNA Hybridization to Identify Differences in the Genomes of Bacteria	Dr. Shanks, Orin C. (65%) Dr. Santo Domingo, Jorge W. (30%) Dr. Graham, James E. (5% Non-EPA) NRMRL	Scientific and Technological Achievement in the Field of Genomics
S7ER0019	Establishment of Transgenic Herbicide-Resistant Creeping Bentgrass (Agrostis Stolonifera L.) in Nonagronomic Habitats	Dr. Reichman, Jay R. (30%) Dr. Watrud, Lidia S. (25%) Dr. Lee, Henry E. (10%) Dr. Burdick, Connie A. (10%) Dr. Bollman, Mike A. (10% Non-EPA) Dr. Storm, Marjorie J. (5% Non-EPA) Dr. King, George A. (5% Non-EPA) Dr. Mallory-Smith, Carol (5% Non-EPA) NHEERL	Ecological Research Presenting the First Evidence for Escape of Transgenic Plants into Wild Populations within the USA
S7ER0024 and S7ER0023 (These two nominations are recommended for one combined award)	Biota-Sediment Accumulation Factors for Polychlorinated Biphenyls, Dibenzo-p-dioxins, and Dibenzofurans in Southern Lake Michigan Lake Trout (Salvelinus Namaycush) (1) Comparison of Biota-Sediment Accumulation Factors Across Ecosystems (2) A Hybrid Empirical-Mechanistic Modeling Approach for Extrapolating BSAFs and BAFs Across Species, Time and/or Ecosystems.	Dr. Lukasewycz, Marta T. (34%) Dr. Burkhard, Lawrence P. (33%) Dr. Cook, Phillip M. (33%) Dr. Lukasewycz, Marta T. (34%) Dr. Burkhard, Lawrence P. (33%) Dr. Cook, Phillip M. (33%) NHERL	Providing High Quality Set of Biota-Sediment Accumulation Factors for PCBs, PCDDs, and PCDFs Developing Methods for Extrapolating Bioaccumulation Data

Nominations Recommended for a Level II Award -- Total of 13			
S7ER0028	Coho Salmon Dependence on Intermittent Streams	Dr. Wigington Jr., Parker J. (33%) Dr. Ebersole, Joseph L. (20%) Dr. Leibowitz, Scott G. (5%) Dr. White, Denis (3%) Dr. Baker, Joan P. (3%) Dr. Church, M. Robbins (3%) Dr. Brooks, Renee J. (3%) Dr. Cairns, Michael A. (3%) Dr. Compton, Jana E. (3%) Dr. Colvin, Michael E. (15% Non-EPA) Dr. Miller, Bruce (3% Non-EPA) Dr. Hansen, Bruce (3% Non-EPA) NHEERL	For Outstanding Research Quantifying the Influence of Intermittent Streams on the Biological Integrity of Navigable Waters
S7ER0032	(1) Uptake and Elimination of Ionizable Organic Chemicals at Fish Gills:I. Model Formulation, Parameterization, and Behavior (2) Uptake and Elimination of Ionizable Organic Chemicals at Fish Gills:II. Observed and Predicted Effects of pH, Alkalinity, and Chemical Properties.	Dr. Erickson, Russell J. (20%) Dr. McKim, James M. (20%) Dr. Lien, Gregory J. (20%) Dr. Hoffman, Alex D. (20%) Dr. Batterman, Shane L. (20%) NHEERL	A Mechanistic Model for Effects of pH on Risks of Ionizable Organic Chemicals to Fish
S7ER0141	Linking Land Cover and Water Quality in New York City's Water Supply Watersheds.	Dr. Mehaffey, Megan (30%) Dr. Nash, Maliha (20%) Dr. Wade, Timothy (20%) Dr. Ebert, Donald (10%) Dr. Jones, Bruce K. (10%) Dr. Rager, Audrey (10% Non-EPA) NERL	New York City Water Supply Research which Demonstrated Tangible Environmental and Economic Impact

Nominations Recommended for a Level II Award -- Total of 13			
S7HE0058	Mini-Monograph: Risk Assessment/ Issues in TCE Risk Assessment (Contains 5 Articles)	Dr. Chiu, Weihsueh A. (30%) Dr. Calwell, Jane C. (25%) Dr. Scott, Cheryl S. (20%) Dr. Keshava, Nagalakshmi (19%) Dr. Evans, Marina V. (2%) Dr. Okino, Miles S. (2%) Dr. Lipscomb, John C. (2%) NCEA	An Update and Perspective on Some of the More Critical and Contentious Scientific issues in the Risk Assessment of TCE
S7MM0078	Land-Cover Change Detection using Multi-Temporal MODIS NDVI Data	Dr. Lunetta, Ross S. (34%) Dr. Knight, Joseph F. (23%) Dr. Lyon, John G. (10%) Dr. Worthy, L. Dorsey (10%) Dr. Ediriwickrema, Jayantha (23% Non-EPA) NERL	Original Research in the Area of Land-Cover Change Detection to Advance Regional Scale Environmental Monitoring Science
S7MM0144 & S7SS0143 These two nomina-tions are recom-mended for one com-bined award)	National Environmental Health Measures for Minority and Low-Income Populations: Tracking Social Disparities in Environmental Health Environmental Health Disparities: A Framework Integrating Psychosocial and Environmental Concepts	Dr. Payne-Sturges, Devon C. (50%) Dr. Gee, Gilbert C. (50% Non-EPA) Dr. Payne-Sturges, Devon C. (50%) Dr. Gee, Gilbert C. (50% Non-EPA) OCHEE	Development of Indicators/Measures to Track Environmental Health Impacts of Racial and Ethnic Minority Communities Advancing the Interdisciplinary Study of Racial/Ethnic Disparities in Environmental Health and Cumulative RisK
**Note: The percentages given after 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 37			
Nom.	**Titles and Citations of Submitted Papers**	**Eligible Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7CS00 02	Destruction of Spores on Building Decontamination Residue in a Commercial Autoclave	Dr. Lemieux, Paul (50%) Dr. Sieber, Roy (20% Non-EPA) Dr. Osborne, Aaron (20% Non-EPA) Dr. Woodard, Alan (10% Non-EPA) NHSRC	Publishing Operating Procedures to use Commercial Autoclaves to Sterilize Building Decontamination Waste
S7CS00 03 &	(1) Tetrahaloindate(lll) -Based Ionic Liguids in the Coupling Reaction of Carbon Dioxide and Epoxides to Generate Cyclic Carbonates: H-Bonding and Mechanistic Studies (2) Microwave-Assisted Preparation of 1-Butyl-3-Methylimidazolium Tetrachlorogallate and its Catalytic use in Acetal Formation Under Mild Conditions	Dr. Varma, Rajender S. (50%) Dr. Kim, Yong Jin (50% Non-EPA)	Designing a Process for Converting Greenhouse Gas, CO2, to Cyclic Carbonates in Non-Volatile Ionic Liquid Solvents
S7CS00 04 & S7OR00 90 (These three nomina-tions are recom-mended for a com-bined award)	(1) Aqueous N-Alkylation of Amines using Alkyl Halides: Direct Synthesis of Tertiary Amines Under Microwave Irradiation (2) An Efficient and Simple Aqueous N-Heterocyclization of Aniline Derivatives: Microwave-Assisted Synthesis of N-Aryl Azacycloalkanes (3) Microwave-Assisted Cyclocondensation of Hydrazine Derivatives with Alkyl Dihalides or Ditosylated in Aqueous Media: Syntheses of Pyrazole, Pyrazolidine, and Phthalazine Derivatives (1) Green and Controlled Synthesis of Gold and Platinum Nanomaterials Using Vitamin B2: Density-assisted Self-assembly of Nanospheres, Wires and Rods (2) Dextrose-Templated Microwave-Assisted Combustion Synthesis of Spongy Metal Oxides	Dr. Varma, Rajender S. (50%) Dr. Ju, Yuhong (50% Non-EPA) Dr. Varma, Rajender S. (50%) Dr. Nadagouda, Mallikarjuna N. (50% Non-EPA) NRMRL	Exceptional Technical Achievement in Developing a Microwave Technology for Greener Chemical Processing in Water Developing a Novel Approach for Greener Production and Safer Use of Noble Nanometals and Metal Oxides
**Note: The percentages given after name represent the current percent of the total level of effort as documented in the EPA nomination*			

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
Nom.	**Titles and Citations of Submitted Papers**	**Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7ER0011	(1) Mechanistic Basis for Estrogenic Effects in Fathead Minnow (Pimephales Promelas) Following Exposure to the Androgen 17a-methyltestosterone: Conversion of 17a-Methyltestosterone to 17a- Methylestradiol (2) Effects of Two Fungicides With Multiple Modes of Action on Reproductive Endocrine Function in the Fathead Minnow. (Pimephales Promelas)	Dr. Ankley, Gerald T. (12%) Dr. Jensen, Kathleen M. (10%) Dr. Kahl, Michael D. (10%) Dr. Durhan, Elizabeth J. (10%) Dr. Hornung, Michael W. (8%) Dr. Denny, Jeffrey S. (5%) Dr. Tala, Henry R. (5%) Dr. Korte, Joseph J. (5%) Makynen, Elizabeth A. (5%) Butterworth, Brian C. (5%) Dr. Villeneuve, Daniel L. (5%) Dr. Gray, L. Earl (5%) Dr. Cardon, Mary C. (5%) Dr. Wilson, Vickie S. (5%) Dr. Linnum, Ann L. (5% Non-EPA) NHEERL	Assessing Reproductive Endocrine Effects of Chemicals Acting Via Multiple Modes of Action in a Fathead Minnow Assay
S7ER0014	Availability of Cluepeid Prey to Primary Piscivores in Smith Mountain Lake, Virginia	Dr. Cyterski, Michael (80%) Dr. Ney, John (20% Non-EPA) NERL	Development of a Comprehensive Methodology for Examining the Adequacy of a Prey Resource for Piscine Predators
S7ER0015	Does Soil CO2 Efflux Acclimatize to Elevated Temperature and CO2 During Long Term Treatment of Douglas-Fir Seedlings	Dr. Tingey, David T. (30%) Dr. Lee, E. Henry (25%) Dr. Waschmann, Ronald S. (15%) Dr. Johnson, Mark G. (15%) Dr. Rygiewicz, Paul T. (15%) NHEERL	Application of New Statistical Methods to Detect Seasonality in Soil Respiration Caused by Above Ground Plant Processes
S7CS0006	Characterizing Pipe Wall Demand: Implications for Water Quality Modeling	Dr. Haught, Roy C. (50%) Dr. Clark, Robert M. (50%) NRMRL	Research to Understand Health Benefits Associated with Disinfection Residuals in Drinking Water Distribution Systems

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
S7ER0018	Hydraulic Redistribution in a Douglas-Fir Forest: Lessons from System Manipulations	Dr. Brooks, Renee J. (50%) Dr. Meinzer, Fredrick C. (15% Non-EPA) Dr. Warren, Jeff (15% Non-EPA) Dr. Domec, Jean-Christophe (10% Non-EPA) Dr. Coulombe, Rob (10% Non-EPA) NHEERL	A Mechanistic Understanding of How Mature Forest Ecosystems use Water
S7ES0037	Ultra Low Sulfur Diesel (ULSD) Sulfur Test Method Variability: A Statistical Analysis of Reproducibility from the 2005 US EPA ULSD Round-Robin Test Program	Dr. Laroo, Christopher A. (50%) Dr. Mason, Robert L. (25% Non-EPA) Dr. Buckingham, Janet P. (25% Non-EPA) OTAQ	Exceptional Technological Achievement in Supporting Implementation of Emissions Reductions in HD Diesel Engines
S7HE0040	(1) Disruption of Iron Homeostasis as a Mechanism of Biologic Effect by Ambient Air Pollution Particles (2) DMT1 Decreases Metal-Related Injury in the Lung (3) TNF, IFN-Gamma, and Endotoxin Increase Expression of DMT1 in Bronchial Epithelial Cells	Dr. Ghio, Andrew J. (25%) Dr. Dailey, Lisa A. (25%) Dr. Stonehuerner, Jackie (25%) Dr. Madden, Michael (25%) NHEERL	Defining the Participation of Iron Homeostasis in the Toxicity of PM
S7HE0044	Acute Health Reference Values: Overview, Perspective, and Current Forecast of Needs	Dr. Woodall, Jr., George M. (100%) NCEA	
S7HE0045	Framework for Evaluation of Physiologically Based Pharmacokinetic Models for Use in Safety or Risk Assessment	Dr. Harris, Leona (34%) Dr. Barton, Hugh A. (33%) Dr. Setzer, R. Woodrow (33%) NCCT	Facilitating the Evaluation and Utilization of Physiologically Based Pharmacokinetic (PBPK) Models in Risk Assessment

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
Nom.	**Titles and Citations of Submitted Papers**	**Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7HE0047	Overview of Studies Under Consideration for the Development of an IRIS Assessment	Dr. Pagan, Ines (100%) NCEA	Providing Innovative Approaches on Presentation of Information Related to the Human Health Risk Assessment for Chloroprene
S7HE0051	Air Contaminant Exposures During the Operation of Lawn and Garden Equipment	Dr. Baldauf, Richard (51%) Dr. Weinstein, Jason (40%) Dr. Fortune, Christopher (3% Non-EPA) Dr. Wheeler, Michael (3% Non-EPA) Dr. Blanchard, Fred (3% Non-EPA) NRMRL	Substantial Contributions to the Assessment and Reduction of Health Risks Posed by Emissions From Lawn and Garden Equipment
S7HE0054	(1) Identification and Characterization of Novel Stable Deoxyguanosine and Deoxyadenosine Adducts of Benzo(a)pyrene-7,8-Quinone from Reactions at Physiological ph (2) Benzo(a)pyrene-7,8-Quinone-3' - Mononucleotide Adduct Standards for 32P Postlabeling Analyses: Detection of Benzo(a)pyrene-7,8Quinone-Calf Thymus DNA Adducts	Dr. Padgett, William T. (27%) Dr. Nesnow, Stephen (22%) Dr. Nelson, Garret B. (12%) Dr. Lambert, Guy R. (5%) Dr. Richard, Ann M. (2%) Dr. Ross, Jeffrey A. (2%) Dr. Swank, Adam (2%) Dr. Balu, Narayanan (28% Non-EPA) NHEERL	Exceptional Contribution to Understading the Environmental Carcinogenesis of Polycyclic Aromatic Hydrocarbons

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
S7HE0055	(1) Transcriptional Profiles in Liver From Mice Treated with Hepatotumorigenic and Nonhepatotumorigenic Triazole Conazole Fungicides: Propiconazole, Triadimefon, and Myclobutanil (2) Transcriptional Profiles in Liver From Rats Treated with Tumorigenic and Non-Tumorigenic Triazole Conazole Fungicides: Propiconazole, Triadimefon, and Myclobutanil (3) Toxicity Profiles in Mice Treated with Hepatotumorigenic and Non-Hepatotumorigenic Triazole Conazole Fugicides: Propiconazole, Triadimefon, and Myclobutanil	Dr. Nesnow, Stephen (12%) Dr. Allen, James W. (8%) Dr. Delker, Don (8%) Dr. Hester, Susan D. (8%) Dr. Thai, Sheau-Fung (8%) Dr. Ward, Ward O. (8%) Dr. Wolf, Douglas (8%) Dr. George, Michael H. (5%) Dr. Jones, Carlton (5%) Dr. Moore, Tanya (5%) Dr. Nelson, Gail (5%) Dr. Roop, Barbara (5%) Dr. Sun, Guobin (5%) Dr. Winkfield, Ernest (5%) NHEERL	Exceptional Contribution That Changed Default Assumptions on the Modes of Action of Tumorigenic Conazole Fungicides Based on Toxicogenomics
S7HE0056	(1) Exposure Parameters Necessary for Delayed Puberty and Mammary Gland Development in Long-Evans Rats Exposed In Utero to Atrazine (2) Adverse Effects of Prenatal Exposure to Atrazine During a Critical Period of Mammary Gland Growth (3) Mammary Gland Development as a Sensitive End-Point Following Acute Prenatal Exposure to a Low Dose Atrazine Metabolite Mixture in Femal Long Evans Rats	Dr. Fenton, Suzanne E. (55%) Dr. Stanko, Jason P. (10%) Dr. Wood, Carmen (10%) Dr. Youngblood, Geri L. (5%) Dr. Rayner, Jennifer L. (10% Non-EPA) Dr. Geiner, Sara N. (5% Non-EPA) Dr. Enoch, Rolondo R. (5% Non-EPA) NHEERL	Published Adverse Low-Dose Effects of Female Rat Mammary Glands Following Prenatal Exposure to Atrazine Metabolites
S7HE0059	Estimation of Ambient and Non-Ambient Components of Particulate Matter Exposure from a Personal Monitoring Panel Study	Dr. Wilson, William E. (90%) Dr. Brauer, Micahel (10% Non-EPA) NCEA	Developing a Method to Estimate Ambient and Nonambient Personal Exposure and Applying it to Panel Epidemiology

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
S7HE0145	(1) Use of Physiologically Based Pharmacokinetic Model for Rats to Study the Influence of Body Fat Mass and Induction of CYP1A2 on the Pharmacokinetics of TCDD (2) Comparison of the Use of a Physiologically Based Pharmacokinetic Model and a Classical Pharmacokinetic Model for Dioxin Exposure Assessments (3) Physiologically Based Pharmacokinetic Model for Development Exposures to TCDD in the Rat	Dr. DeVito, Michael J. (35%) Dr. Birnbaum, Linda S. (20%) Dr. Emond, Claud (40% Non-EPA) Dr. Michaleki, Joel (5% Non-EPA) NHEERL	The Development of a PBPK Model for Dioxin for Use in Human Risk Assessment
S7MM0066	Development of Size Selective Sampling of Bacillus anthracis Surrogate Spores from Simulated Building Air Intake Mixtures for Analysis Via Laser Induced Breakdown Spectroscopy (LIBS)	Dr. Snyder, Emily (70%) Dr. Gullett, Brian (15%) Dr. Ryan, Shawn (5%) Dr. Touati, Abderrahmane (5% Non-EPA) Dr. Oudejans, Lukas (5% Non-EPA) NHSRC	The Development of Laser Induced Breakdown Spectroscopy (LIBS) for B. anthracis Surrogate Spore Detection
S7MM0068	Method Development for the Analysis on N-Nitrosodimethylamine and Other N-Nitrosamines in Drinking Water at Low Nanogram/Liter Concentrations using Solid-Phase Extraction and Gas Chromatography Ionization Tandem Mass Spectrometry	Dr. Munch, Jean W. (75%) Dr. Bassett, Margarita V. (25%) NERL	Development of a Sensitive and Specific Method to Measure Low ng/L Concentrations of Nitrosamines in Drinking Water
S7OR0094	Apparent 85Kr Ages of Groundwater within the Royal Watershed, Maine, USA	Dr. Sidle, William (100%) NRMRL	Development and Application of 85Kr Isotope Dating Techniques in Ground Water Vulnerability Risk Assessments

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
S7RA0096	Air Emission Inventories in North America: A Critical Assessment	Dr. Miller, C. Andrew (56%) Dr. Mobley, J. David (4%) Dr. Hidy, George (4% Non-EPA) Dr. Hales, Jeremy (4% Non-EPA) Dr. Kolb, Charles E. (4% Non-EPA) Dr. Werner, Arthur S. (4% Non-EPA) Dr. Haneke, Bernd (4% Non-EPA) Dr. Parish, David D. (4% Non-EPA) Dr. Frey, H. Christopher (4% Non-EPA) Dr. Rojas-Bracho, Leonora (4% Non-EPA) Dr. Deslauriers, Marc (4% Non-EPA) Dr. Pennell, Bill Non-EPA) NRMRL	A Critical Overview of Air Emission Inventories with Recommendations to Improve their Value to Air Quality Management
S7RA0098	The Fathead Minnow in Aquatic Toxicology:Past, Present and Future	Dr. Ankley, Gerald T. (50%) Dr. Villeneuve, Daniel L. (50%)	Developing a Comprehensive Review for a Small Fish Model, the Fathead Minnow, Key to USEPA Regulatory Activities
S7RA0099	The Multidisciplinary Influence of Common Sustainability Indices	Dr. Mayer, Audrey L. (40%) Dr. Thurston, Hale W. (30%) Dr. Pawlowski, Christopher W. (30% Non-EPA) NRMRL	a Timely and Perceptive Review of the Multidimensional Nature of Sustainability Indices
S7RA0100	Systematic Approach to Evaluating Trade-Offs among Fuel Options: The Lessons of MTBE	Dr. Davis, J. Michael (90%) Dr. Thomas, Valerie M. (10% Non-EPA) NCEA	Articulating a Comprehensive Assessment Approach for Fuels and Fuel Additives

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
S7RA0102	Classifying Coastal Waters: Current Necessity and Historical Perspective	Dr. Kurtz, Janis C. (40%) Dr. Detenbeck, Naomi D. (20%) Dr. Engle, Virginia E. (20%) Dr. Ho, Kay (5%) Dr. Smith, Lisa M. (5%) Dr. Jordan, Stephen J. (5%) Dr. Campbell, Dan (5%) NHEERL	Evaluating Environmental Classification Approaches for their Ability to Group Estuaries with Similar Sensitivity to Nutrient Pollution
S7RA0105	Methods for Speciation of Metals in Soils: a Review	Dr. Ryan, James A. (40%) Dr. Al-Abed, Souhail R. (15%) Dr. Scheckel, Kirk G. (10%) Dr. D'Amore, John J. (35% Non-EPA) NRMRL	Promoting the Application of Metal Speciation in EPA Research
S7RA0109	Emissions of Organic Air Toxics from Open Burning: a Comprehensive Review	Dr. Lemieux, Paul (70%) Dr. Lutes, Christopher C. (15% Non-EPA) Dr. Santoianni, Dawn A. (15% Non-EPA) NHSRC	Compiling a Comprehensive Review of Air Toxics Data from Open Burning Sources
S7RA0116	Developmental Neurotoxicity of Pyrethroid Insecticides: Review and Future Research Needs	Dr. Shafer, Timothy J. (65%) Dr. Crofton, Kevin M. (20%) Dr. Meyer, Douglas A. (15% Non-EPA) NHEERL	Analysis of the State of Science to Support Cumulative Risk Determinations of Pyrethroids Under FQPA
S7TF0121	The 2-Norbornyl Cation is Not A Single Minimum Energy System	Dr. Mamantov, Andrew (100%) OPPT	Insightful Contribution and Innovative Prediction of Hydrolysis of Polycyclic Halides

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
S7TF0123	Volatile Organic Compounds from Vegetation in Southern Yunnan Province, China: Emission Rates and Some Potential Regional Implications	Dr. Geron, Chris D. (75%) Dr. Owen, Sue M. (10% Non-EPA) Dr. Guenther, Alex B. (8% Non-EPA) Dr. Greenberg, Jim P. (2% Non-EPA) Dr. Rasmussen, Rei (2% Non-EPA) Dr. Bai, Jian Hui (1% Non-EPA) Dr. Li, Qing-Jun (1% Non-EPA) Dr. Baker, Brad (1% Non-EPA) NRMRL	Discovery of Oxidant and Aerosol Precursor VOC Emissions in Asia and their Regional to Global Implications
S7TF0124	Effects of pH and Phosphate on Metal Distribution with Emphasis on As Speciation and Mobilization in Soils from a Lead Smelting Site	Dr. Impellitteri, Christopher A. (100%) NRMRL	Research on the Stabilization of Metals and Speciation of Arsenic in Mine Wastes
S7TF0128	(1) Reduction of Nitrosobenzenes and N-hydroxylanilines by Fe(ll) Species: Elucidation of the Reaction Mechanism (2) QSAR Study of the Reduction of Nitroaromatics by Fe(ll) Species	Dr. Colon, Dalizza (55%) Dr. Weber, Eric J. (23%) Dr. Winget, Paul (5%) Dr. Suarez, Luis A. (5%) Dr. Anderson, James L. (12% Non-EPA) NERL	Improving the Ability to Predict the Reduction rates for nitroaromatics and their Intermediates in the Environments
S7TF0129	(1) Degradation of Chlorpyrifos in Aqueous Chlorine Solutions: Pathways, Kinetics, and Modeling (2) Monitoring the Speciation of Aqueous Free Chlorine from pH 1 to 12 with Raman Spectroscopy to Determine the Identity of the Potent Low-pH Oxidant	Dr. Duirk, Stephen E. (55%) Dr. Collette, Timothy W. (22%) Dr. Cherney, Daniel P. (18% Non-EPA) Dr. Tarr, J. Christopher (5% Non-EPA) NERL	Innovative use of Measurements and Modeling to Forecast the Fate of Pesticides During Water Treatment
**Note: The percentages given after name represent the current percent of the total level of effort as documented in the EPA nomination*			

Nominations Recommended for a Level III Award (Cont'd) -- Total of 37			
Nom.	**Titles and Citations of Submitted Papers**	**Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7TF0133	Mineralogy and Characterization of Arsenic, Iron, and Lead in A Mine Waste Derived Fertilizer	Dr. Williams, Aaron G. B. (40%) Dr. Scheckel, Kirk G. (30%) Dr. Impelliteri, Christopher A. (20%) Dr. Tolaymat, Thabet (10%) NRMRL	Speciation and Risk Characterization of Hazardous Materials in Ironite
S7TF0134	Simplified Modeling of Flushing and Residence Times in 42 Embayments in New England, USA, with Special Attention to Greenwich Bay, Rhode Island	Dr. Abdelrhman, Mohamed (100%)	Simple Models of Residence Time in Embayments to Understand Ecological Response and Enhance Classification Endeavors
S7TF0137	(1) Arsenic Cycling within the Water Column of a Small Lake Receiving Contaminated Ground-Water Discharge (2) Arsenic Solid-Phase Partitioning in Reducing Sediments of a Contaminated Wetland	Dr. Ford, Robert G. (48%) Dr. Wilkin, Richard T. (47%) Dr. Hernandez-Roberts, Gina (5% Non-EPA) NRMRL	Research that Provides the Basis for Assessing Arsenic Mobility in Contaminated Ground Water and Sediments
**Note: The percentages given after name represent the current percent of the total level of effort as documented in the EPA nomination*			

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
Nom.	**Titles and Citations of Submitted Papers**	**Authors* and Nominating Organization**	**Suggested Citation from Nominating Organization**
S7EF0008	Titanium Dioxide (P25) Produces Reactive Oxygen Species in Immortalized Brain Microglia (BV2): Implications for Nanoparticle Neurotoxicity	Dr. Veronesi, Bellina (50%) Dr. Long, TC (25% Non-EPA) Dr. Lowry, Gregory V. (25% Non-EPA) NHEERL	Outstanding Toxicology Research that Links the Physical Properties of Particles with their Biological Activity in Nerve Cells
S7EF0009	The ToxCast Program for Prioritizing Toxicity Testing of Environmental Chemicals	Dr. Dix, David (30%) Dr. Houck, Keith (20%) Dr. Kavlock, Robert (20%) Dr. Martin, Matthew (10%) Dr. Richard, Ann (10%) Dr. Setzer, R. Woodrow (10%) NCCT	ToxCast: A Biologically and Chemically Based System for EPA Program Offices to Prioritize Toxicity Testing of Chemicals
S7EF0101	Assaying Particle-Bound Polycyclic Aromatic Hydrocarbons from Archived PM2.5 Filters	Dr. Pleil, Joachim D. (60%) Dr. Vette, Alan F. (20%) Dr. Rapaport, Stephen M. (20% Non-EPA) NERL	Innovative Analytical Methodology for Assessing Population Based Ecologic Exposure to PAHs using Archived PM2.5 Samples
S7ER0012	Sediment Microbial Enzyme Activity as an Indicator of Nutrient Limitation in Great Lakes Coastal Wetlands	Dr. Hill, Brian H. (50%) Dr. Elonen, Colleen M. (20%) Dr. Jicha, Terri M. (10%) Dr. Trebitz, Anett S. (10%) Dr. Cotter, Anne M. (5%) Dr. Danz, Nick P. (5% Non-EPA) NHEERL	Development of a Novel Indicator of Wetland Nutrient Limitation

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7ER0017	Identification of Metabolites of Trenbolone Acetate in Androgenic Runoff from a Beef Feedlot	Dr. Durhan, Elizabeth J. (20%) Dr. Jensen, Kathleen M. (20%) Dr. Makynen, Elizabeth A. (15%) Dr. Lambright, Christy C. (10%) Dr. Gray, L. Earl (5%) Dr. Hartig, Phillip C. (5%) Dr. Kahl, Michael D. (5%) Dr. Lazorchak, James M. (5%) Dr. Wilson, Vickie S. (5%) NHEERL	Evaluation of the Ecological Risk of Synthetic Steroids used in Livestock
S7ER0020	Status of the Amphipod Diporeia spp. In Lake Superior, 1994-2000	Dr. Scharold, Jill V. (60%) Dr. Lozano, Stephen J. (20%) Dr. Corry, Timothy D. (20%) NHEERL	Utility of a Benthic Indicator for Assessing Ecosystem Health
S7ER0021	Use of Powdered Coconut Charcoal as a Toxicity Identification and Evaluation Manipulation for Organic Toxicants in Marine Sediments	Dr. Ho, Kay (25%) Dr. Burgess, Robert (20%) Dr. Pelletier, Marguerite (15%) Dr. Serbst, Jonathan (5%) Dr. Cantwell, Mark (5%) Dr. Ryba, Stephen (5%) Dr. Perron, Monique (5% Non-EPA) Dr. Cook, Howard (5% Non-EPA) Dr. Lebo, John (5% Non-EPA) Dr. Huckins, James (5% Non-EPA) Dr. Petty, Jim (5% Non-EPA) NHEERL	Development of Methods to Characterize and Identify Organic toxicants in Whole Sediments

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7ER0022	Method for Testing the Aquatic Toxicity of Sediment Extracts for use in Identifying Organic Toxicants in Sediments	Dr. Heinis, Larry J. (40%) Dr. Highland, Terry L. (30%) Dr. Mount, David R. (30%)	Development of Methods for Isolating and Identifying Organic Toxicants in Contaminated Sediments
S7ER0026	Relationships Among Exceedences of Metals Criteria, the Results of Ambient Bioassays, and Community Metrics in Mining Impacted Streams	Dr. Griffith, Michael B. (70%) Dr. Lazorchak, James M. (20%) Dr. Alan . Herlihy, Alan T. (10% Non-EPA) NCEA	Research Showing the Consistency of Chemical Criteria, Ambient Bioassays and Community Metrics in the Nation's Waters
S7ER0027	(1) Benthic Versus Planktonic Foundations of Three Lake Superior Coastal Wetland Food Webs (2) Hydrology and Nutrient Effects on Food-Web Structure in Ten Lake Superior Coastal Wetlands.	Dr. Sierszen, Michael E. (40%) Dr. Peterson, Gregory S. (10%) Dr. Trebitz, Anett S. (10%) Dr. Moffett, Mary F. (10%) Dr. Morrice, John A. (10%) Dr. West, Corlis W. (10%) Dr. Brazner, John C. (10%) NHEERL	Analyses of Factors Governing Food Web Structure in Great Lakes Coastal Wetlands
S7ER0034	(1) Application of Elasticity Analyses and Perturbation Simulations in Determining Stressor Impacts on Population Growth Rate and Extinction Risk (2) From Individuals to Populations: Modeling Toxicity Data Across Two Levels of Biological Organization	Dr. Raimondo, Sandy (60%) Dr. Mckenney Jr., Charles L. (20%) Dr. Barron, Mace G. (20%) NHEERL	Advancing our Understanding of, and our Ability to Predict, Population Responses to Stressors
S7ES0038	Evaluating Predictive Errors of a Complex Environmental Model using a General Linear Model and Least Square Means	Dr. Knightes, Christopher D. (60%) Dr. Cyterski, Michael J. (40%) NERL	Presenting a Statistical Method Evaluating Predictive Bias of Environmental Models that use Categorical Input Data
S7ES0039	(1) Including Transition Probabilities in Nest Survival Estimation: A Mayfield Markov Chain (2) The Effects of Uncertainty about Age at Transition on Bias in the Mayfield Family of Estimators	Dr. Etterson, Matthew A. (75%) Dr. Bennett, Richard S. (25%) NHEERL	Development of a Unified Markov Chain Theoretical Framework for Estimating Avian Reproductive Success

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7ES0142	(1) Identification and Predication of Fish Assemblages in Streams of the Mid-Atlantic Highlands, USA (2) Predictive Habitat Models for the Occurrence of Stream Fishes in the Mid-Atlantic Highlands	Dr. Cyterski, Micheal J. (30%) Dr. Rashleigh, Brenda (25%) Dr. Parmar, Rajbir S. (15%) Dr. Johnston, John M. (15%) Dr. Barber, M. Graig (15%) NERL	Development of Modeling Tools to Analyze Ecological Outcomes of Alternative Stream Management Strategies
S7HE0041	Detection of Androgenic Activity in Emissions From Diesel Fuel and Biomass Combustion	Dr. Owens, Jr., Clyde V. (40%) Dr. Wilson, Vickie S. (40%) Dr. Lambright, Christy (5%) Dr. Cardon, Mary (5%) Dr. Gray, Jr., L. (5%) Dr. Gullett, Brian K. (5%) NRMRL	Exceptional Research Demonstrating the Importance of Investigating Androgens Found in Diesel and Wood Combustion

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7HE0042	(1) Gene Expression Patterns Associated With Infertility in Humans and Rodent Models (2) Reproductive and Genomic Effects in testes From Mice Exposed to the Water Disinfectant Byproduct Bromochloroacetic Acid (3) Gene Expression Profiling in Liver and Testis of Rats to Characterize the Toxicity of Triazole Fungicides	Dr. Dix, David (13%) Dr. Rockett, John C. (13%) Dr. Schmid, Judith E. (13%) Dr. Tully, Douglas B. (13%) Dr. Luft, J. Christopher (7%) Dr. Ren, Hongzu (7%) Dr. Wood, Carmen R. (7%) Dr. Bao, Wenjun (3%) Dr. Strader, Lillian F. (3%) Dr. Best, Deborah S. (3%) Dr. Narotsky, Michael G. (3%) Dr. Wolf, Douglas C. (3%) Dr. Patrizio, Pasquale (3% Non-EPA) Dr. Hecht, Norman B. (3% Non-EPA) Dr. Blystone, Chad (3% Non-EPA) Dr. Goetz, Amber (3% Non-EPA) NCCT	Developing Toxicogenomic Methods and Data Identifying Mechanisms of Reproductive Toxicity for Environmental Chemicals

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7HE0046	(1) The Acquisition and Application of Absorption, Distribution, Metabolism, and Excretion (ADME) Data in Agricultural Chemical Safety Assessments (2) A Tiered Approach to Systemic Toxicity Testing for Agricultural Chemical Safety Assessment (3) A Tiered Approach to Life Stages Testing for Agricultural Chemical Safety Assessment	Dr. Cooper, Ralph (5%) Dr. Barton, Hugh (5%) Dr. Wolf, Douglas (5%) Dr. Dellarco, Vicki L. (5%) Dr. Phang, Whang (5%) Dr. Makris, Susan (5%) Dr. Diliberto, Janet (5%) Dr. Padilla, Stephanie (5%) Dr. Whitby, Karen (5%) Dr. Baetcke, Karl (5%) Dr. Kimmel, Carole (5%)	Development of a Scientifically Improved Method for Assessing the safety of Pesticide Chemicals More Efficiently and Accurately, With fewer Animals
S7HE0049	Evaluating the Relationship Between Variance in Enzyme Expression and Toxicant Concentration in Health Risk Assessment	Dr. Lipscomb, John C. (100%) NCEA	Communicating a Method to Incorporate in Vitro Metabolic Data in Uncertainty Factors
S7HE0050	(1) An Approach for Developing a National Estimate of Waterborne Disease Due to Drinking Water and a National Estimate Model Application (2) Estimates of Endemic Waterborne Risks From Community-Intervention Studies (3) The Role of Disease Burden in Future Estimates of Endemic Waterborne Disease	Messner, Michael (19%) Shaw, Susan (5%) Regli, Stig, (4%) Rotert, Ken (2%) Blank, Valerie (3%) Stoller Jeff (5% Non EPA) Calderon, Rebecca (25%) Craun, Gunter (8% Non EPA) Rice, Glenn (8%) Heberling, Mathew (5%) Rothermich, Mary (5%) Wright, J. Michael (5%) Murphy Patricia (5%) Craun, Michael (5% Non EPA) NHEERL	Outstanding Contributions to the Agency's First National Estimate of Waterborne Disease for the United States
S7HE0052	Criteria and Air-Toxic Emissions From In-Use Automobiles in the National Low-Emission Vehicle Program	Dr. Gabele, Pete (40%) Dr. Baldauf, Richard (35%) Dr. Cook, Richard (15%) Dr. Crews, William (5% Non-EPA) Dr. Snow, Richard (5% Non-EPA) NRMRL	Substantial Contribution in the Assessment and Reduction of Health Risks Posed by Air Toxics From Motor Vehicles

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7IR0060	Individual vs Organism vs Populations in the Definition of Ecological Assessment Endpoints	Dr. Wellman, Marjorie (7% Non-EPA) Dr. Wharton, Steve (7% Non-EPA) Dr. Norton, Susan B. (7% Non-EPA) Dr. Fairbrother, Anne (7% Non-EPA) NCEA	Researching and Clarifying the Ecological Bases for the U.S. EPA's Risk-Informed Decisions
S7MM0064	PCDD and PCDF Emissions from Simulated Sugarcane Field Burning	Dr. Gullett, Brian (75%) Dr. Touati, Abderrahmane (15% Non-EPA) Dr. Huwe, Janice (5% Non-EPA) Dr. Hakk, Heldur (5% Non-EPA) NRMRL	Determining Methods to Quantify Emissions of PCDD/PCDF from Agricultural Burning
S7MM0065	(1) Calculation of Electron Affinities of Polycyclic Aromatic Hydrocarbons and Solvation Energies of their Radical Anions (2) Electron Affinities of Polynuclear Aromatic Hydrocarbons and Negative-Ion Chemical-Ionization Senstivities	Dr. Betowski, Leon D. (32%) Dr. Enlow, Mark (15%) Dr. Riddick, Lee (3%) Dr. Aue, Donald H. (45% Non-EPA) Dr. Enlow, Mark (5% Non-EPA) NERL	Modeling used to Predict the Sensitivities of PAHs under Chemical Ionization Mass Spectrometric Conditions
S7MM0067	Detection of Human Enteric Viruses in Stream Water with RT-PCR and Cell Culture	Dr. Fout, G. Shay (30%) Dr. Dahling, Daniel R. (20%) Dr. Denis-Mize, Kimberly (30% Non-EPA) Dr. Francy, Donna S. (20% Non-EPA) NERL	Demonstrating the Value of Field Matrix Spikes in Virus Occurrence Studies of Recreational or Drinking Water Sources

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7MM0069	Characterization of the Fugitive Particulate Emissions from Construction Mud/Dirt Carryout	Dr. Kinsey, John S. (55%) Dr. Linna, Kara L. (15%) Dr. Squier, William C. (15%) Dr. Muleski, Gregory E. (10% Non-EPA) Dr. Cowherd, Jr., Chatten (5% Non-EPA) NRMRL	The First Directly Measured Fine PM Emission Factors from Paved Road Mud/Dirt Carryout
S7MM0073	Evaluation of Bacteriological Indicators of Disinfection for Alkaline Treated Biosolids	Dr. Meckes, Mark C. (60%) Dr. Rhodes, Eric R. (40%) NRMRL	Developing Data which Supports the use of Alternative Indicator Microorganisms for Biosolids
S7MM0074	(1) Evaluation of Short-Term Ogawa Passive Photolytic, and Federal Reference Method Sampling Devices for Nitrogen Oxides in El Paso and Houston, Texas (2) Evaluation of Ogawa Passive Sampling Devices as an Alternative Measurement Method for the Nitrogen Dioxide Annual Standard in El Paso, Texas	Dr. Sather, Mark E. (40%) Dr. Slonecker, E. Terrence (20%) Dr. Mathew, Johnson (15%) Dr. Kronmiller, Keith G. (10% Non-EPA) Dr. Williams, Dennis D. (10% Non-EPA) Dr. Daughtrey, Hunter (5% Non-EPA)	A More Simple and Less Expensive Monitoring Method for Ambient Nitrogen Oxides
S7MM0077	(1) Evaluation of Optically Acquired Zooplankton Size-Spectrum Data as a Potential Tool for Assessment of Condition in the Great Lakes (2) Comparisons of Zooplankton Community Size Structure in the Great Lakes	Dr. Yurista, Peder M. (60%) Dr. Kelly, John R. (20%) Dr. Miller, Samuel E. (20%)	New Indicators, Technologies, and Strategies for the Next Generation of Great Lakes Assessment
S7MM0081	(1) A Simple Multiplex Polymerase Chain Reaction Assay for the Identification of Four Environmentally Relevant Fungal Contaminants (2) A Simple Polymerase Chain Reaction/Restriction Fragment Length Polymorphism Assay Capable of Identifying Medically Relevant Filamentous Fungi (3) A Simple Polymerase Chain Reaction-Sequencing Analysis Capable of Identifying Multiple Medically Relevant Filamentous Fungal Species	Dr. Dean, Timothy R. (75%) Dr. Kohan, Michael (15%) Dr. Menetrez, Marc Y. (5%) Dr. Betancourt, Doris (5%) Dr. Roop, Barbara (0%) NRMRL	The Identification and Characterization of Fungal Biological Contaminants Prevalent within the Built Environment

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7OR0082	Preparing Highway Emissions Inventories for Urban Scale Modeling: A Case Study in Philadelphia	Dr. Cook, James Richard (55%) Dr. Strum, Madeleine L. (10%) Dr. Beidler, Allan (20% Non-EPA) Dr. Touma, Jawad S. (15% Non-EPA) NVFEL	Research which Greatly Improved the Agency's Ability to Develop Air Toxic Inventories for Mobile Sources at the Local Level
S7OR0084	(1) Inactivation of Spores of Bacillus Anthracis Sterne, Bacillus Cereus, and Bacillus thuringiensis subsp. Israelensis by Chlorination (2) Inactivation of Bacillus globigii by Chlorination: A Hierarchical Bayesian Model	Dr. Rice, Eugene W. (30%) Dr. Sivaganesan, Mano (30%) Dr. Adcock, Noreen J. (30%) Dr. Rose, Laura J. (10% Non-EPA) NHSRC	The Evaluation of Surrogates for Bacillus anthracis for use in Disinfection Studies
S7OR0086	A Novel Technique for the Rapid Identification of Alpha Emitters Released during a Radiological Incident	Dr. Dilbeck, George A. (35%) Dr. Leitch, Jerrold M. (10%) Dr. Moore, Brian J. (10%) Dr. Honsa, Patricia C. (5%) Dr. Taylor, Bud (30% Non-EPA) Dr. Silverstone, Marina (10% Non-EPA) RIENL	A Rapid Assessment Tool Enabling the EPA to Respond More Efficiently to Nuclear Incidents Involving Alpha Contamination
S7OR0087	Estimating Streamflow and Associated Hydraulic Geometry the Mid-Atlantic Region, USA	Dr. Mohamoud, Yusuf M. (67%) Dr. Parmar, Rajbir S. (33%) NERL	Contributing to the Solution of a Practical Problem: Predictions in Ungauged Basins

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7OR0089	Basin-Wide Analysis of the Dynamics of Fecal Contamination and Fecal Source Identification in Tillamook Bay, Oregon	Dr. Shanks, Orin C. (35%) Dr. Nietch, Christopher (15%) Dr. Field, Kate (15% Non-EPA) Dr. Simonich, Michael (15% Non-EPA) Dr. Reynolds, Don (15% Non-EPA) Dr. Younger, Melissa (5% Non-EPA) NRMRL	Scientific and Technical Achievement in the Field of Water Quality Monitoring with Fecal Indicators
S7OR0093	Characterization of Airborne and Bulk Particulate from Iron and Steel Manufacturing Facilities	Dr. Machemer, Steven D. (100%) NEIC	Potential of Respirable Particle Hazards from Steel Mills Suggesting a Need for Inhalation RFC's for Ca Oxide/Hydroxide
S7OR0095	Diagnosis of Trace Pb in Domestic Wells, Upper Gloucester Catchment, Maine, USA	Dr. Sidle, William (100%) NRMRL	Pb Isotope Methods for Discrimination of Drinking Water Contamination Among Rural Water Districts
S7RA0106	Trends Analysis of Ambient 8 Hour Ozone and Precursor Monitoring Data in the South Central U.S.	Dr. Sather, Mark E. (95%) Dr. Cavender, Kevin (5%)	A Better Understanding of the Ozone Pollution Problems in the South Central U.S. through trends Analysis of PAMS Data
S7RA0113	Toxicity Tests for Sediment Quality Assessments	Dr. Ireland, Scott D. (60%) Dr. Ho, Kay (40%)	Review of Assessment Techniques for Assessing Sediment Quality for Toxicologists and Policy Makers Across the World
S7RA0139	Temperature and Toxicology:An Integrative, Comparative, and Environmental Approach CRC Press, Boca Raton, FL, 338 PP	Dr. Gordon, Christopher J. (100%) NHEERL	Publishing a Thorough Review of the Literature on the Effects of Temperture on the Toxicity of Environmental Pollutants
S7RM0117	Evaluation of Lead Availability in Amended Soils Monitored over a Long-term Time Period	Dr. Barth, Edwin F. (80%) Dr. Succop, Paul A. (10% Non-EPA) Dr. Evans, Mark L. (10% Non-EPA) NRMRL	Implementation of a Unique Monitoring Program to Evaluate the Sustainability of a Soil Amendment Process

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 45			
S7TF0126	The Distribution, Solid-Phase Speciation, and Desorption/Dissolution of as in Waste Iron-Based Drinking Water Treatment Residuals	Dr. Impellitteri, Christopher A. (70%) Dr. Scheckel, Kirk G. (30%) NRMRL	Research on the Behavior of Arsenic in Drinking Water Treatment Wastes
S7TF0127	Arsenate and Arsenite Sorption on and Arsenite Oxidation by Iron(ll, lll) Hydroxycarbonate Green Rust	Dr. Su, Chunming (75%) Dr. Wilkin, Richard T. (25%) NRMRL	Cutting-Edge Research on Arsenic Interactions with Iron-Bearing Minerals
S7TF0130	Uncertainty from Synergistic Effects of Multiple Parameters in the Johnson and Ettinger (1991) Vapor Intrusion Model	Dr. Weaver, James W. (50%) Dr. Tillman, Fred D. (50% Non-EPA) NERL	Improving Assessment of Vapor Intrusion by Illuminating Uncertainties in Modeling
S7TF0131	(1) Detection and Quantification of a Thio-Arsenosugar in Marine Mollusks by IC-ICP-MS with an Emphasis on the Interaction of Arsenosugars with Sulfide as a Function of pH (2) In Vitro Biotransformation of an Arsenosugar by Mouse Anaerobic Cecal Microflora and Cecal Tissue as Examined using IC-ICP-MS and LC-ESI-MS/MS	Dr. Creed, John T. (20%) Dr. Creed, Patricia A. (20%) Dr. Thomas, David J. (16%) Dr. Kohan, Mike (15%) Dr. Herbin-Davis, Karen (0%) Dr. Conklin, Sean D. (20% Non-EPA) Dr. Fricke, Michael W. (2% Non-EPA) Dr. Ackerman, Amanda H. (2% Non-EPA) NERL	Study of the Conversion of Arsenic Oxides to Arsenic Sulfides in Seafoods and in the Cecal Content of a Mouse
S7TF0136	Effects of Different Forms of Organic Carbon on the Partitioning and Bioavailability of Nonhlphenol	Dr. Burgess, Robert M. (25%) Dr. Pelletier, Marguerite C. (25%) Dr. Gundersen, Jennifer L. (25%) Dr. Ryba, Stephan A. (15%) Dr. Perron, Monique M. (10% Non-EPA)	Innovative Research to Understand Factors Affecting the Bioavailability of the Emerging Contaminant Nonylphenol
**Note: The percentages given after 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
NEIC - National Enforcement Investigations Center
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
OCHEE - Office of Children's Health and Environmental Education
OPPT - Office of Pollution Prevention and Toxics
OTAQ - Office of Transportation and Air Quality
OWOW - Office of Wetlands, Oceans and Watersheds