



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

**OFFICE OF THE ADMINISTRATOR
SCIENCE ADVISORY BOARD**

January 28, 2015

EPA-SAB-15-005

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

**Subject: SAB Recommendations for EPA's FY 2014 Scientific and Technological
Achievement Awards**

Dear Administrator McCarthy:

The EPA Science Advisory Board (SAB) is pleased to transmit its recommendations for the EPA's FY 2014 Scientific and Technological Achievement Awards (STAA). The STAA program was established by the agency in 1980 to recognize EPA employees who have made outstanding contributions to the advancement of science and technology through their publications in peer-reviewed literature or books. The SAB has been asked by EPA's Office of Research and Development to review EPA's nominated scientific publications and make recommendations for awards. We are pleased to continue to play this important role in the STAA program.

This year, the EPA submitted a total of 72 nominations comprised of 116 publications in 12 science and technology categories. The SAB recommends: one nomination for Level I, the highest award; two nominations for Level II; 20 nominations for Level III; and 29 nominations for Honorable Mention. The SAB's recommendations are provided in the enclosed report.

Overall, the SAB commends the agency for its publications and finds that the 2014 STAA nominations were generally of very good quality. The SAB also appreciates the agency's implementation of most SAB recommendations from previous years for improving the nomination procedures and administration of the STAA program.

The 2014 STAA nominations contained a larger percentage of review articles than has been the case in recent years. Several of the nominated review articles lacked a critical synthesis and evaluation of the literature, and did not provide future perspectives. The SAB notes that reviews which include a critical synthesis and evaluation of the available literature with an assessment on future perspectives on topics relevant to EPA's mission are more consistent with the STAA award criteria.

Similar to advice in prior years, the SAB recommends that the EPA implement the following activities to further strengthen the STAA program as well as facilitating the SAB review of future STAA nominations:

- Significantly shorten the time between receiving the SAB recommendations for STAA recognition and notifying award recipients.
- Ensure that submitted nominations are not misplaced and all are delivered to SAB in a timely manner.
- Strengthen the justification section of the nominations as to their scientific contributions and relevance to EPA's mission.
- Ensure that the justification sections for nominations comprising multiple publications clarify the relationship between the publications within the nomination.
- Ensure that all authors with current nominations separately list all publication(s) that were nominated for STAA award over the previous five years, sorted by current year nominated authors.
- Ensure that all nominations include relevant supplemental materials, including those published with the original article, that support how the research was conducted, such as information on sample preparation or derivations of equations, and include links to the internet to access these materials.
- Improve the process for generating nominations in order to stimulate greater quantity and quality of nominations.

To further foster recognition of EPA scientists and engineers who have published significant research, as recommended in SAB's January 13, 2014 Report that provided recommendations for EPA's FY 2013 STAA award program, the SAB recommends that the EPA consider developing a separate awards program to retrospectively recognize prior EPA research (e.g., published within the last ten years) that is no longer eligible for the STAA award program but is demonstrated to have had a significant impact over extended time towards EPA's mission.

The objectives of the STAA program are to provide recognition and awards to agency authors whose scientific and technological contribution resulted in high quality peer reviewed publications, to make the general public more aware of the quality and depth of EPA science, and to improve the credibility of the science underpinning agency decisions on important scientific issues of specific importance to EPA. The agency is commended for meeting these objectives through its annual STAA program and the SAB applauds the EPA's public recognition of the scientific work of EPA scientists and engineers that is published in the peer-reviewed literature. Thank you for providing the SAB with the opportunity to assist the agency with this important program. The SAB looks forward to reviewing the FY 2015 STAA nominations.

Sincerely,

/signed/

Dr. David T. Allen, Chair
EPA Science Advisory Board

/signed/

Dr. George Daston, Chair
SAB Scientific and Technological
Achievement Awards Committee

Enclosure

NOTICE

This report has been written as part of the activities of the EPA Science Advisory Board, a public advisory group providing extramural scientific information and advice to the Administrator and other officials of the Environmental Protection Agency. The Board is structured to provide balanced, expert assessment of scientific matters related to the problems facing the agency. This report has not been reviewed for approval by the agency and, hence, the contents of this report do not represent the views and policies of the Environmental Protection Agency, nor of other agencies in the Executive Branch of the Federal government, nor does mention of trade names or commercial products constitute a recommendation for use. Reports of the EPA Science Advisory Board are posted on the EPA website at <http://www.epa.gov/sab>.

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1. BACKGROUND

EPA's Scientific and Technological Achievement Awards program (STAA) was established in 1980 to recognize the agency's scientists and engineers who published their technical work in the peer-reviewed literature. The STAA program is administered and managed by the EPA Office of Research and Development (ORD). Each year, the EPA Science Advisory Board (SAB) has been asked to review the EPA's nominated scientific publications and make recommendations for awards. The SAB was charged to review nominations and provide recommendations for each nomination in consideration of the EPA's criteria for STAA awards. The EPA announced the call for nominations for the 2014 STAA program to senior managers and employees in January 2014 (Appendix A). ORD screened nominations for conformance with EPA's *STAA Nomination Procedures and Guidelines*. The Guidelines describe the award levels, eligibility criteria, and the award criteria.

The EPA's criteria for STAA Program awards are as follows:

- 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.
- 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.
- 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.
- Honorable Mention is for nominations which are noteworthy but which do not warrant a Level I, II or III award. Honorable Mention applies to nominations that: (1) may not quite reach the level described for a Level III award; (2) show a promising area of research that the SAB wants to encourage; or (3) show an area of research that the SAB believes is too preliminary to warrant an award recommendation at this time.

2. SAB REVIEW PROCEDURE

The SAB Staff Office formed a new SAB STAA Committee in 2012 to annually review EPA's STAA nominations. The Committee members were invited to serve for a three-year term. The Committee was formed in accordance with the SAB process as described in the SAB 2002 publication, *Panel Formation Process: Immediate Steps to Improve Policies and Procedures* (EPA-SAB-EC-COM-02-003).

All EPA nominations and nomination evaluation criteria were provided to the SAB Committee in advance of the review meeting. The SAB review consisted of a two-step process: an initial review of each nomination, followed by a Committee discussion of all nominations. The initial review of each nomination was conducted by two or three members. Committee members provided their individual initial ratings of the nominations based on the EPA's award criteria as described in Section 1.

In May 2014, ORD submitted to the SAB Staff Office 71 nominations for 2014 STAA awards in 12 possible science and technology categories. The SAB STAA Committee met at a closed meeting on July 28, 2014, in Washington, DC. The meeting was closed to the public because the Committee discussions involved personnel matters, including the relative merits of various employees and their respective work, the disclosure of which would be a clearly unwarranted invasion of personal privacy and, therefore, protected from disclosure by section (c)(6) of the Government in the Sunshine Act, 5 U.S.C. 552b(c)(6). Committee members discussed all nominations (see Table 1), and reached consensus on the recommendations for awards. To avoid an appearance of a lack of impartiality, some members were asked to be recused from the Committee deliberations on selected nominations. The Committee also discussed administrative recommendations for improving the STAA nomination process.

In September 2014, ORD submitted one additional nomination for review and consideration for 2014 STAA award. The SAB STAA Committee held a closed teleconference on November 7, 2014 to develop a recommendation to the EPA Administrator regarding the additional nomination, along with fourteen additional nominations for the 2013 award program that had not been forwarded previously. (The results of the review for these additional 2013 nominations have been provided in a separate addendum to the 2013 SAB report.)

Table 1. 2014 STAA Nominations by Topic Category

Topic	Number of Nominations Submitted to SAB
Ecological Research	11
Energy and the Environment	2
Environmental Policy and Decisionmaking Studies	3
Health Effects Research and Human Health Risk Assessment	11
Industry and the Environment	2
Integrated Risk Assessment	4
Monitoring and Measurement Methods	7
Other Environmental Research	4
Review Articles	13
Risk Management and Ecosystem Restoration	1
Sustainability and Innovation	4
Transport and Fate	10
TOTAL	72

3. AWARD RECOMMENDATIONS

Table 2 summarizes the awards by year since Fiscal Year 2002, including the recommendations for 2014. For 2014, the Committee recommended: one nomination for Level I, the highest award; two for Level II; 20 for Level III; and 29 for Honorable Mention. Appendix B lists the recommended awards for Levels I through III, and nominations that deserve an Honorable Mention. The final rankings were agreed to by consensus at the STAA Committee meeting on July 28, 2014 and at the STAA Committee teleconference on November 7, 2014. Table 3 summarizes the distribution of 2014 award recommendations among categories.

Table 2. Comparison of Award Recommendations over Time

Award Level	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Nominations Reviewed	140	136	146	110	90	140	130	109	121	130	104	117	72
Level I	4 (3%)	7 (5%)	6 (4%)	3 (3%)	5 (6%)	5 (4%)	5 (4%)	3 (3%)	5 (4%)	3 (2%)	4 (4%)	0	1 (1%)
Level II	7 (5%)	18 (13%)	13 (9%)	6 (5%)	11 (12%)	13 (9%)	16 (12%)	22 (20%)	14 (12%)	13 (10%)	10 (10%)	10 (9%)	2 (3%)
Level III	26 (19%)	29 (21%)	32 (22%)	30 (27%)	29 (32%)	37 (26%)	30 (21%)	31 (28%)	42 (35%)	35 (27%)	29 (28%)	27 (23%)	20 (28%)
Honorable Mention	39 (28%)	33 (24%)	37 (25%)	31 (28%)	26 (29%)	45 (32%)	43 (33%)	25 (23%)	33 (27%)	44 (34%)	36 (35%)	45 (38%)	29 (40%)
Not Recommended	64 (46%)	49 (36%)	58 (40%)	40 (36%)	19 (21%)	40 (29%)	36 (28%)	28 (26%)	27 (22%)	35 (27%)	25 (24%)	35 (30%)	20 (28%)

Table 3. Summary Number of Award Recommendations by Category for FY2014

Nomination Categories	Total Nominations	Award Levels				Honorable Mention
		I	II	III	Total	
Ecological Research	11	0	0	4	4	6
Energy and the Environment	2	0	0	1	1	0
Environmental Policy and Decision making Studies	3	0	0	0	0	3
Health Effects Research and Human Health Risk Assessment	11	1	1	2	4	3
Industry and the Environment	2	0	0	1	1	0
Integrated Risk Assessment	4	0	0	2	2	1
Monitoring and Measurement Methods	7	0	0	1	1	4
Other Environmental Research	4	0	0	1	1	2
Review Articles	13	0	1	3	4	3
Risk Management and Ecosystem Restoration	1	0	0	0	0	1
Sustainability and Innovation	4	0	0	0	0	2
Transport and Fate	10	0	0	5	5	4
TOTALS:	72	1	2	20	23	29

4. ADMINISTRATIVE RECOMMENDATIONS

The SAB appreciates the EPA's implementation of the recommendations from the recent SAB reports to the Administrator that improve the nomination process and enhance the integrity of the STAA program. In particular, the SAB concludes that the strong majority of the 2014 nominations adhered to existing STAA program guidelines.

The SAB has the following recommendations to further strengthen the STAA program in future years:

Additional Requirements for Nomination Form:

- *For each nominated author, separately list all publication(s) from that author that were nominated and the associated outcome for STAA award(s) over the previous five years.* Currently, the STAA nomination form requires submission of a list of publications that were previously nominated for STAA awards, sorted by the authors of the current nomination. Several of the 2014 nominations did not include a comprehensive list of these prior nominations sorted by author. The SAB recommends that the STAA nomination form adjust the current requirements for this information and require submission of a list that categorizes prior nominations by author for the previous five years of the STAA competition. This information will assist the Committee in assessing the differences between such nominations.
- *Require that all relevant supplemental materials be included in the nomination package with links to the internet to access these materials.* Currently, the Criteria for Eligibility within the STAA Program's Nomination Procedures and Guidelines recommend that any supplemental information sent to journals should be included within the nomination. Several of the 2014 nominations did not include relevant supplemental materials that were sent to the journals where the articles were published. This supplemental information frequently provides useful context on the quality and innovativeness of the research (e.g., information on sample preparation or derivations of equations) and the potential consequences of the research within its discipline or field of study. The STAA nomination form should be revised to require that all relevant supplemental materials be included in the nomination package and include links to the internet to access these materials if such links are available.

Assurance of Completeness and Clarity of Nomination Package:

- *Develop an improved tracking system to ensure that all submitted nominations are not misplaced and are delivered to SAB in a timely manner.* In July 2013, ORD submitted to the SAB Staff Office 105 nominations for 2013 STAA awards, and in January, 2014, SAB signed its report with recommendations to the EPA Administrator for 2013 STAA awards. In May 2014, ORD submitted to the SAB Staff Office 71 nominations for 2014 STAA awards, and in July, 2014, the SAB STAA Committee met to review and consider these nominations for 2014 STAA awards. However, ORD NCER misplaced fifteen 2013 STAA nominations and one 2014 STAA nomination that it received during the 2013 and 2014 STAA nomination periods, respectively, and sent these additional nominations to SAB for its consideration in September 2014. SAB's STAA Committee held a teleconference in November 2014 to review and consider these additional nominations for 2013 and 2014 STAA recognition. ORD should develop an improved tracking system for ensuring that incoming STAA nominations are not misplaced. This

improved system should ensure that all nominators will receive notice that their nomination has been received by ORD, and that all nominations will be delivered to SAB in a timely manner.

- *Strengthen the justification sections of the nominations regarding their scientific contributions and relevance to EPA's mission.* Several nominations for 2014 STAA recognition did not mention or comprehensively discuss the scientific contributions of the publications submitted as part of the nomination, or the relevance of the nominated publications to EPA's mission. The SAB encourages the EPA to ensure that the justification sections of nominations comprehensively discuss their scientific contributions and relevance to EPA's mission.
- *Each nomination should discuss the relationship between publications within nominations comprised of multiple publications.* The agency's nomination criteria include that up to three publications may be combined into one nomination if the publications have similar subjects and authors. Several nominations for 2014 STAA recognition did not discuss the link between subject matter for the different publications submitted as part of a single nomination, or described a link that was not evident upon review of the articles. As recommended in previous advice, the SAB encourages the EPA to ensure that the justification sections for nominations comprising more than one publication fully describe the relationship between publications within such nominations.

Evaluation of Review Articles:

- *Review articles that are submitted for awards should include a critical synthesis and evaluation of the literature and an assessment on future perspectives.* The 2014 STAA nominations contained a larger percentage of review articles than have been submitted for STAA award recognition in recent years. This year, submitted nominations under the review article category outnumbered nominations submitted under all other categories (the last time this happened was ten years ago). While reviews that summarize a body of literature are useful and important, the SAB believes that review articles that critically synthesize and evaluate information and lead to new insights, with an assessment on future perspectives, are most consistent with the criteria for STAA awards.

Timeliness of Issuing STAA Awards:

- *Shorten the time between the EPA's annual receipt of SAB recommendations for STAA recognition and the EPA's notifications to award recipients.* The SAB is concerned that there has been a significant time lag between the EPA's receipt of the 2012 and 2013 SAB recommendations for STAA recognition and the EPA's notifications to 2012 and 2013 STAA award recipients. This recurring problem was recognized in the SAB's recommendations for the 2013 STAA program. The SAB strongly recommends that the agency improve the process for generating awards and shorten the time between receiving the SAB recommendations for STAA recognition and notifying award recipients.
- *Improve the process for generating nominations in order to stimulate greater quantity and quality of nominations.* The SAB observes that the total number of 2014 STAA nominations for award is significantly less when compared to previous years. In order to help encourage EPA staff to submit additional nominations, the SAB recommends that the agency improve the process that agency staff use to generate nominations for STAA awards in ways that stimulate

greater quantity and quality of nominations.

APPENDIX A - CALL FOR NOMINATIONS FOR THE 2014 STAA PROGRAM

January 2, 2014

MEMORANDUM

SUBJECT: The 2014 Scientific and Technological Achievement Awards (STAA) Program

FROM: Lek G. Kadelic
Acting Assistant Administrator

TO: Assistant Administrators
Associate Administrators
Regional Administrators

It is a pleasure to announce this year's call for nominations for the 2014 Scientific and Technological Achievement Awards (STAA) program. STAA is an Agency-wide competition, judged by the Science Advisory Board (SAB), which recognizes outstanding published scientific and technical papers by the Agency's staff. This year's nominations will be accepted via electronic submission to nominations.STAA@epa.gov. Note that the 2014 STAA awards may not include a monetary award.

Attached are (1) nomination procedures and guidelines, (2) review schedule, and (3) nomination form. Official 2014 nomination forms are available for your convenience in MS Word and screen fillable Portable Document Format (PDF) at <http://epa.gov/ncer/staa/>. All nominations must be received no later than midnight ET Thursday, February 6, 2014. Instructions for completion and electronic submission of nomination packages are attached. Should questions arise, please contact Ben Packard at (703) 347-8087 *or packard.benjamin@epa.gov.

cc: EPA Science Advisory Board
EPA Program Offices
EPA Regional Offices
ORD Center/Laboratory Directors

Attachments

January 2, 2014

EPA SEEKING APPLICATIONS FOR 2014 STAA AWARDS

MEMORANDUM

SUBJECT: The 2014 Scientific and Technological Achievement Awards (STAA) Program

FROM: Lek G. Kadeli
Principal Deputy Assistant Administrator

TO: All EPA Employees

I am pleased to issue this year's call for nominations for the EPA's prestigious 2014 Scientific and Technological Achievement Awards (STAA). Each year, EPA recognizes outstanding papers written by the Agency's staff and published in scientific and technical journals. STAA is open to all EPA employees. Nominations are judged by the EPA's Science Advisory Board (SAB), and managed by the Office of Research and Development.

Nominations can be submitted in the following categories:

- Control Systems and Technology
- Ecological Research
- Health Effects Research and Human Health Risk Assessment
- Monitoring and Measurement Methods
- Transport and Fate
- Review Articles
- Risk Management and Ecosystem Restoration
- Integrated Risk Assessment
- Environmental Policy and Decision-Making Studies
- Homeland Security
- Industry and the Environment
- Energy and the Environment
- Sustainability and Innovation
- Other Environmental Research

Note that the 2014 STAA awards may not include a monetary award.

This year's nominations will be accepted via electronic submission to nominations.STAA@epa.gov. You can find the nomination forms and guidelines and additional information about the STAA program at www.epa.gov/ncer/staa/. Nominations will be accepted until midnight ET on Thursday, February 6. Should questions arise, please contact Ben Packard at (703) 347-8087 or packard.benjamin@epa.gov.

Attachments

APPENDIX B - NOMINATIONS RECOMMENDED FOR STAA AWARDS

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

Nominations Recommended for a Level I Award -- One		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14HE0022	<p>(1) Estimating the National Public Health Burden Associated with Exposure to Ambient PM2.5 and Ozone</p> <p>Risk Analysis, 32(1):81-95</p> <p>(2) The Recent and Future Health Burden of Air Pollution Apportioned Across U.S. Sectors</p> <p>Environmental Science and Technology, 47:3580-3589</p>	<p>Fann, Neal (20%) Baker, Kirk (20%) Fulcher, Charlie (20%) Hubbell, Bryan (10%) Lamson, Amy (10%) Wesson, Karen (10%) Anenberg, Susan (5%) Risley, David (5%)</p> <p>NHEERL</p>

Nominations Recommended for a Level II Award -- Total of 2		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14HE0026	<p>High-Throughput Models for Exposure-Based Chemical Prioritization in the ExpoCast Project</p> <p>Toxicological Sciences, 47:8479-88</p>	<p>Setzer, R. Woodrow (20%) Wambaugh, John F. (20%) Hubal, Elaine Cohen (10%) Reif, David M. (5%) Mitchell-Blackwood, Jade (5%) Gangwal, Sumit (5%) Frame, Alicia (5%) Rabinowitz, James (5%) Knudsen, Thomas B. (5%) Judson, Richard S. (5%) Egeghy, Peter (5%) Vallero, Daniel A. (5%) Arnot, Jon A. (5% non-EPA) Jolliet, Olivier (5% non-EPA)</p> <p>NCCT</p>
S14RA0048	<p>(1) Ballast Water Regulations and the Move Towards Concentration-Based Numeric Discharge Limits</p> <p>Ecological Applications, 23(2):</p> <p>(2) Counting At Low Concentrations: The Statistical Challenges of Verifying Ballast Water Discharge Standards</p> <p>Ecological Applications, 23(2):339-351</p>	<p>Albert, Ryan J. (16.7%) Lishman, John (10%) Saxena, Juhi (6.7%) Lee, II, Henry (21.7%) Frazier, Melanie (25%) Miller, A. Whitman (6.7% non-EPA) Reusser, Deborah A. (13.3% non-EPA)</p> <p>NHEERL</p>

Nominations Recommended for a Level III Award -- Total of 20		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14EE0001	Emergy Evaluations of the Global Biogeochemical Cycles of Six Biologically Active Elements and Two Compounds Ecological Modeling, 271:32-51	Campbell, Daniel (59%) Lu, Hongfang (39% non-EPA) Lin, Bin-Le (2% non-EPA) NHEERL
S14ER0006	Advancing the Guanica Bay (Puerto Rico) Watershed Management Plan Coastal management, 41:19-38	Carriger, John (50%) Fisher, William S. (35%) Stockton, Jr., Tom B. (10% non-EPA) Sturm, P.E. (5% non-EPA) NHEERL
S14ER0008	Mysid population responses to resource limitation differ from those predicted by cohort studies Marine Ecology Progress Series, 432:115-123	Grear, Jason (34%) Horowitz, Doranne Borsay (33%) Gutjarhr-Gobell, Ruth (33%) NHEERL
S14ER0010	Nutrient Distributions, Transports, and Budgets on the Inner Margin of a River-Dominated Continental Shelf Journal of Geophysical Research - Oceans, 118:4822-4838	Lehrter, John (60%) Murrell, Michael (5%) Greene, Richard (3%) Hagy, James D. (3%) Schaeffer, Blake (3%) Ko, Dong (20% non-EPA) Gould, Jr., Richard W. (3% non-EPA) Penta, Brad (3% non-EPA) NHEERL
S14HE0021	(1) An Assessment of the Exposure of Americans to Perfluorooctane Sulfonate: A Comparison of Estimated Intake with Values Inferred from NHANES Data Journal of Exposure Science and Environmental Epidemiology, 21(2):150-168 (2) Simple Intake and Pharmacokinetic Modeling to Characterize Exposure of Americans to Perfluorooctanoic Acid, PFOA Environmental Science and Technology, 45:8006-8014	Egeghy, Peter P. (50%) Lorber, Matthew N. (50%) NERL

Nominations Recommended for a Level III Award -- Total of 20		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14HE0023	Arsenic Exposure and Toxicology: A Historical Perspective Toxicological Sciences, 123(2):305-332	Hughes, Michael F. (25%) Thomas, David J. (25%) Beck, Barbara (15% non-EPA) Chen, Yu (20% non-EPA) Lewis, Ari (15% non-EPA) NHEERL
S14IE0029	(1) Sustainability Indicators for Chemicals Processes: 1. Taxonomy Industrial & Engineering Chemistry Research, 51(5):2309-2328 (2) Sustainability Indicators for Chemicals Processes: II. Data Needs Industrial & Engineering Chemistry Research, 51(5):2329-2353	Ruiz-Mercado, Gerardo J. (50%) Smith, Raymond L. (25%) Gonzalez, Michael A. (25%) NRMRL
S14IR0031	Evaluation of PCB Bioaccumulation by <i>Lumbriculus variegatus</i> in Field-Collected Sediments Environmental Toxicology and Chemistry, 32:1495-1503	Burkhard, Lawrence P. (16%) Mount, David R. (16%) Highland, Terry L. (16%) Hockett, J. Russell (16%) Norberg-King, Teresa J. (16%) Billa, Nanditha (5% non-EPA) Hawthorne, Steven B. (5% non-EPA) Miller, David J. (5% non-EPA) Grabanski, Carol B. (5% non-EPA) NHEERL
S14IR0032	(1) Contribution of Lubricating Oil to Particulate Matter Emissions from Light-Duty Gasoline Vehicles in Kansas City Environmental Science & Technology, 46:4191-4199 (2) Particulate Matter Speciation Profiles for Light-Duty Gasoline Vehicles in the United States Journal of the Air & Waste Management Association, :	Sonntag, Darrell B. (55%) Bailey, Chad R. (20%) Baldauf, Richard W. (15%) Fulper, Carl R. (5%) Yanca, Catherine A. (5%) NVFEL

Nominations Recommended for a Level III Award -- Total of 20		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14MM0041	<p>Diocetyl Sulfosuccinate Analysis in Near Gulf of Mexico Water by Direct-injection Liquid Chromatography-Tandem Mass Spectrometry</p> <p>Journal of Chromatography A, 1231:46-51</p>	<p>Zintek, Lawrence B. (25%) Schroeder, David L. (25%) Johnson, Mathew (25%) Wesolowski, Dennis J. (14%) Schupp, George C. (5%) Schupp, Caitlin R. (2% non-EPA) Kosempa, Michael G. (2% non-EPA) Zachary, Adam M. (2% non-EPA)</p> <p>CRL</p>
S14OR0045	<p>Where is the Consensus? A Proposed Foundation for Moving Ecosystem Service Concepts into Practice</p> <p>Ecological Economics, 77:27-35</p>	<p>Nahlik, Amanda M. (30%) Kentula, Mary E. (30%) Landers, Dixon H. (20%) Fennessy, M. Siobhan (20% non-EPA)</p> <p>NHEERL</p>
S14RA0047	<p>The Effects of Mountaintop Mines and Valley Fills on the Physicochemical Quality of Stream Ecosystems in the Central Appalachians: A Review</p> <p>Science of the Total Environment, 417-418:1-12</p>	<p>Griffith, Michael B. (20%) Norton, Susan B. (20%) Alexander, Laurie C. (20%) Pollard, Amina I. (20%) LeDuc, Stephen D. (20%)</p> <p>NCEA</p>
S14RA0055	<p>(1) Chiral Pesticides: Identification, Description, and Environmental Implication</p> <p>Reviews of Environmental Contamination and Toxicology, 217:1-74</p> <p>(2) Chiral Chlordane Components in Environmental Matrices</p> <p>Book "Chiral Pesticides: Stereoselectivity and Its Consequences, 1085(Chptr 2):11-43</p>	<p>Ulrich, Elin M. (55%) Goldsmith, Michael R. (5%) Falconer, Renee L. (20% non-EPA) Morrison, Candice N. (12% non-EPA) Foreman, William T. (8% non-EPA)</p> <p>NERL</p>

Nominations Recommended for a Level III Award -- Total of 20		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14RA0059	<p>Release Characteristics of Selected Carbon Nanotube Polymer Composites</p> <p>Carbon, 68:33-57</p>	<p>Zepp, Richard G. (25%) Sayre, Philip (10%) Fehir, Richard (10%) Roberts, Justin (5%) Kingston, Christopher (20% non-EPA) Wohlleben, Wendel (6% non-EPA) Andrady, Anthony (4% non-EPA) Boverhof, Darrell (4% non-EPA) Hawkins, Douglas (4% non-EPA) Shelton, Betsy (4% non-EPA) Sultan, Yasir (4% non-EPA) Vejins, Viktor (4% non-EPA)</p> <p>NERL</p>
S14TF0065	<p>(1) Overview of the Atmospheric Model Evaluation Tool (AMET) v1.1 for Evaluating Meteorological and Air Quality Models</p> <p>Environmental Modelling and Software, 26(4):434-443</p> <p>(2) A multi-resolution assessment of the Community Multiscale Air Quality (CMAQ) model v4.7 wet deposition estimates for 2002-2006</p> <p>Geoscientific Model Development, 4(2):357-371</p> <p>(3) Examination of the Community Multiscale Air Quality (CMAQ) model performance over the North American and European Domains</p> <p>Atmospheric Environment, 53:152-155</p>	<p>Appel, Keith W. (25%) Gilliam, Robert C. (15%) Howard, Steven C. (5%) Foley, Kristen M. (4%) Bash, Jesse O. (4%) Pinder, Robert W. (4%) Dennis, Robin L. (3%) Roselle, Shawn J. (3%) Rao, Samohineeveesu T. (3%) Zubrow, Alexis (8% non-EPA) Chemel, Charles (6% non-EPA) Davis, Neil (5% non-EPA) Allen, Dale J. (3% non-EPA) Pickering, Kenneth E. (3% non-EPA) Galmarini, Stefano (3% non-EPA) Francis, Xavier J. (2% non-EPA) Sokhi, Ranjeet S. (2% non-EPA) Hu, Rong-Ming (2% non-EPA)</p> <p>NERL</p>
S14TF0066	<p>Application of Robust Statistical Methods to Background Tracer Data Characterized by Outliers and Left-Censored Data</p> <p>Water Research / Print and Online Journal, 45:3107-3118</p>	<p>Field, Malcolm S. (100%)</p> <p>NCEA</p>

Nominations Recommended for a Level III Award -- Total of 20		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14TF0069	<p>(1) Epoxide Pathways Improve Model Predictions of Isoprene Markers and Reveal Key Role of Acidity in Aerosol Formation</p> <p>Journal-Environmental Science & Technology, 47:11056-11064</p> <p>(2) A Computational Study of Acid Catalyzed Aerosol Reactions of Atmospherically Relevant Epoxides</p> <p>Journal - Physical Chemistry Chemical Physics, 15(41):18065-18076</p>	<p>Pye, Havala O.T. (35%) Piletic, Ivan R. (35%) Edney, Edward O. (8%) Pinder, Robert W. (3%) Luecken, Deborah J. (1%) Hutzell, William T. (1%) Offenberg, John H. (1%) Kleindienst, Tadeusz E. (1%) Lewandowski, Michael (1%) Bartolotti, Libero J. (7% non-EPA) Xie, Ying (1% non-EPA) Capps, Shannon L. (1% non-EPA) Lin, Ying-Hsuan (1% non-EPA) Surratt, Jason D. (1% non-EPA) Gold, Avram (1% non-EPA) Jaoui, Mohammed (1% non-EPA) Zhang, Zhenfa (1% non-EPA)</p> <p>NERL</p>
S14TF0072	<p>(1) Transport of Nanoparticles with Dispersant through Biofilm Coated Drinking Water Sand Filters</p> <p>Water Research, 47:6457-6466</p> <p>(2) Computational Fluid Dynamics Simulation of Transport and Retention of Nanoparticle in Saturated Sand Filters</p> <p>J. Hazardous Materials, 244-245:251-25</p> <p>(3) Transport and Deposition of nano-size CeO₂ through porous media, experimental studies and mathematical modeling</p> <p>Water Research, 45:4409-4418</p>	<p>Sahle-Demessie, Endalkachew (50%) LI, Zhen (25% non-EPA) Hassan, Ashraf Aly (15% non-EPA) Sorial, George (10% non-EPA)</p> <p>NRMRL</p>

Nominations Recommended for a Level III Award -- Total of 20		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14SI0074	<p>(1) An Approach for Integrating Toxicogenomic Data in Risk Assessment: The Dibutyl Phthalate Case Study</p> <p>Toxicology and Applied Pharmacology, 271(3):324-335</p> <p>(2) Use of Genomic Data in Risk Assessment Case Study: I. Evaluation of the Dibutyl Phthalate Male Reproductive Development Toxicity Data Set</p> <p>Toxicology and Applied Pharmacology, 271(3):336-348</p> <p>(3) Use of Genomic Data in Risk Assessment Case Study: II. Evaluation of the Dibutyl Phthalate Toxicogenomic Data Set</p> <p>Toxicology and Applied Pharmacology, 271(3):349-362</p>	<p>Euling, Susan (27%) Makris, Susan (17%) Benson, Robert (9%) Chiu, Weihsueh A. (5%) Kim, Andrea S. (5%) Thompson, Chad M. (5%) White, Lori (5%) Wilson, Vickie S. (4%) Gray, Jr., L. Earl (4%) Sen, Banalata (4%) Keshava, Nagalakshmi (2%) Hester, Susan (2%) Keshava, Channa (2%) Foster, Paul M.D. (4% non-EPA) Ovacik, Meric A. (2% non-EPA) Androulakis, Ioannis P. (1% non-EPA) Gaido, Kevin W. (1% non-EPA) Lerapetritou, Marianthi (1% non-EPA)</p> <p>NCEA</p>

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 29		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14EP0003	(1) Shifting Cultivation, Forest Fallow, and Externalities in Ecosystem Services: Evidence from the Eastern Amazon Journal of Environmental Economics and Management, 61(1):95-106 (2) Constraints or Cooperation? Determinants of Secondary Forest Cover Under Shifting Cultivation Agricultural and Resource Economics Review, 40(3):471-487	Klemick, Heather (100%) NCEE
S14EP0004	Comparing Distributions of Environmental Outcomes for Regulatory Environmental Justice Analysis International Journal of Environmental Research and Public Health, 8:1707-1726	Maguire, Kelly (50%) Sheriff, Glenn (50%) NCEE
S14EP0005	The Spatial Extent of Water Quality Benefits in Urban Housing Markets Land Economics, 87(4):628-644	Walsh, Patrick J. (50%) Milon, J. Walter (25% non-EPA) Scrogin, David O. (25% non-EPA) NCEE
S14ER0009	Classification and Accuracy Assessment for Coarse Resolution Mapping within the Great Lakes Basin, USA Photogrammetric Engineering and Remote Sensing, 79:1015-1026	Iames, Jr., John S. (80%) Lunetta, Ross S. (20%) NERL
S14ER0012	Plankton Community Respiration, Net Ecosystem Metabolism, and Oxygen Dynamics on the Louisiana Continental Shelf: Implications for Hypoxia Continental Shelf Research, 52:27-38	Murrell, Michael (50%) Stanley, Roman S. (30%) Lehrter, John C. (10%) Hagy, Jr., James D. (10%) NHEERL
S14ER0013	Estimating Benefits in a Recovering Estuary: Tampa Bay, Florida Estuaries and Coasts, DOI 10.100:	Russell, Marc (80%) Greening, Holly (20% non-EPA) NHEERL

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 29		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14ER0014	(1) Density Dependent Functional Forms Drive Compensation in Populations Exposed to Stressors Ecological Modeling, 265:149-157 (2) Incorporating Temperature-driven Seasonal Variation in Survival, Growth, and Reproduction Models for Small Fish Marine Ecology Progress Series, 4469:101-112	Raimondo, Sandy (100%) NHEERL
S14ER0015	Approach to Developing Numeric Water Quality Criteria for Coastal Waters: A Transition from SeaWiFS to MODIS and MERIS Satellites Journal of Applied Remote Sensing, 7(1):1-18	Schaeffer, Blake (70%) Hagy, James D. (20%) Stumpf, Richard P. (10% non-EPA) NHEERL
S14ER0016	(1) Comparison of Cropland and Forest Surface Temperatures Across The Conterminous United States Agricultural and Forest Meteorology/Peer reviewed, 166-167:137-143 (2) Empirical Analysis of The Influence of Forest Extent on Annual and Seasonal Surface Temperatures for the Continental United States Global Ecology and Biogeography/Peer reviewed, 22(5):620-629	Wickham, James D. (70%) Wade, Timothy G. (20%) Riitters, Kurt H. (10% non-EPA) NERL
S14HE0018	Assessing Spatial and Temporal Variability of VOCs and PM-components in Outdoor Air During the Detroit Exposure and Aerosol Research Study (DEARS) Atmospheric Environment, 61:159-168	Bereznicki, Sarah (50%) Sobus, Jon (25%) Williams, Ronald (11%) Vette, Alan (9%) Stiegel, Matthew (5% non-EPA) NERL
S14HE0025	Dietary Intakes of Pesticides based on Community Duplicate Diet Samples Science of the Total Environment, 468-469:785-790	Melnyk, Lisa Jo (45%) Xue, Jianping (15%) Michael, Larry C. (25% non-EPA) Brown, G. Gordon (5% non-EPA) McCombs, Michelle (5% non-EPA) Nishioka, Marcia (5% non-EPA) NERL

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 29		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14HE0028	<p>Climate Change-Related Temperature Impacts on Warm Season Heat Mortality: A Proof-of-Concept Methodology Using BenMAP</p> <p>Environmental Science & Technology/Original Article, 45:1450-1457</p>	<p>Voorhees, A. Scott (65%) Fann, Neal (8%) Fulcher, Charles (7%) Dolwick, Patrick (5%) Hubbell, Bryan (5%) Bierwagen, Britta (5%) Morefield, Philip (3% non-EPA)</p> <p>OAR</p>
S14IR0033	<p>Why and How to Combine Evidence in Environmental Assessments: Weighing Evidence and Building Cases</p> <p>Science of the Total Environment, 409:1406-1417</p>	<p>Suter II, Glenn Walter (50%) Cormier, Susan Marie (50%)</p> <p>NCEA</p>
S14MM0035	<p>Diagnosis of Potential Stressors Adversely Affecting Benthic Communities in New Bedford Harbor, MA (USA)</p> <p>Integrated Environmental Assessment and Management/peer reviewed, 8(4):685-702</p>	<p>Ho, Kay (35%) Pelletier, Marguerite (20%) Campbell, Daniel (20%) Burgess, Robert M. (10%) Johnson, Roxanne L. (10%) Rocha, Kenneth J. (5%)</p> <p>NHEERL</p>
S14MM0038	<p>(1) Molecular detection of <i>Campylobacter</i> spp. in California gull (<i>Larus californicus</i>) excreta</p> <p>Applied and Environmental Microbiology, 77:5034-5039</p> <p>(2) Molecular Detection of <i>Campylobacter</i> spp. and Fecal Indicator Bacteria during the Northern Migration of Sandhill Cranes(<i>Grus canadensis</i>) at the Central Platte River</p> <p>Applied and Environmental Microbiology, 79:3762-3769</p>	<p>Lu, Jingrang (55%) Santo Domingo, Jorge W. (15%) Ashbolt, Nicholas J. (15%) Ryu, Hodon (5% non-EPA) Griffith, John F. (5% non-EPA) Vogel, Jason R. (5% non-EPA)</p> <p>NERL</p>
S14MM0039	<p>(1) Comparison of gull feces-specific assays targeting the 16S rRNA gene of <i>Catelliboccus marimammalium</i> and <i>Streptococcus</i> spp</p> <p>Applied and Environmental Microbiology, 78(6):1909-1916</p> <p>(2) Development and evaluation of a qPCR assay targeting fecal pollution of sandhill cranes (<i>Grus canadensis</i>)</p> <p>Applied and Environmental Microbiology, 78:4338-45</p>	<p>Santo Domingo, Jorge W. (50%) Lu, Jingrang (7%) Ashbolt, Nicholas J. (1%) Ryu, Hodon (26% non-EPA) Elk, Michael (4% non-EPA) Hill, Stephen (2% non-EPA) Toledo-Hernandez, Carlos (2% non-EPA) Gonzalez-Nieves, Joel (2% non-EPA) Khan, Izhar (2% non-EPA) Griffith, John F. (1% non-EPA) Vogel, Jason R. (1% non-EPA) Edge, Thomas A. (1% non-EPA) Chavez-Ramirez, Felipe (1% non-EPA)</p> <p>NRMRL</p>

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 29		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14MM0040	<p>(1) Push-through Direct Injection NMR: An Optimized Automation Method Applied to Metabolomics</p> <p>Analyst, 137:2226-2232</p> <p>(2) Impacts of 17α-Ethinylestradiol Exposure on Metabolite Profiles of Zebrafish (<i>Danio rerio</i>) Liver Cells</p> <p>Aquatic Toxicology, 130-131:184-191</p>	<p>Teng, Quincy (30%) Ekman, Drew R. (25%) Collette, Timothy W. (20%) Huang, Wenlin (20% non-EPA)</p> <p>NERL</p>
S14OR0042	<p>(1) Depletion of the protective aluminum hydroxide coating in TiO₂-based sunscreens by swimming pool water ingredients</p> <p>Chemical Engineering Journal, 191:95-103</p> <p>(2) Statistical evaluation of Al(OH)₃ layer damage on TiO₂ nanoparticles in the presence of swimming pool and sea water</p> <p>Journal of Nanoparticle Research, 14(4):1-9</p>	<p>Al-Abed, Souhail (50%) Virkutyte, Jurate (40% non-EPA) Dionysiou, Dionysios D. (10% non-EPA)</p> <p>NRMRL</p>
S14OR0043	<p>Pollutant Emissions and Energy Efficiency under Controlled Conditions for Household Biomass Cookstoves and Implications for Metrics Useful in Setting International Test Standards</p> <p>Environmental Science & Technology, 46:10827-10834</p>	<p>Jetter, James J. (30%) Hays, Michael (15%) Yelverton, Tiffany (5%) DeCarlo, Peter (5% non-EPA) Zhao, Yongxin (25% non-EPA) Smith, Kirk R. (15% non-EPA) Khan, Bernine (5% non-EPA)</p> <p>NRMRL</p>
S14RA0046	<p>Scientific Considerations for Evaluating Cancer Bioassays Conducted by the Ramazzini Institute</p> <p>Environmental Health Perspectives, 121(11-12):1253-1263</p>	<p>Gift, Jeffrey S. (39%) Caldwell, Jane C. (29%) Jinot, Jennifer (19%) Evans, Marina V. (5%) Cote, Ila (4%) Vandenberg, John J. (4%)</p> <p>NCEA</p>
S14RA0052	<p>Macroscopic to Microscopic Scales of Particle Dosimetry: From Source to Fate in the Body</p> <p>Air Quality, Atmosphere & Health / Peer reviewed, 5(2):169-187</p>	<p>Solomon, Paul A. (55%) Bennett, Deborah H. (15% non-EPA) Phalen, Robert F. (10% non-EPA) Gehr, Peter (7% non-EPA) Mendez, Loyda B. (5% non-EPA) Rothen-Rutishauser, Barbara (2% non-EPA) Clift, Martin (2% non-EPA) Brandenberger, Christina (2% non-EPA) Muhlfeld, Christian (2% non-EPA)</p> <p>NERL</p>

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 29		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14RA0058	Application of Enteric Viruses for Fecal Pollution Source Tracking in Environmental Waters Environmental International, 45:151-164	Wong, Kelvin (40%) Molina, Marirosa (15%) Fong, Theng-Theng (30% non-EPA) Bibby, Kyle (15% non-EPA) NERL
S14RM0060	Nature of the Interlayer Environment in an Organoclay Optimized for Sequestration of Dibenzo-p-Dioxin Environmental Science and Technology, 46:9584-9591	Barth, Edwin F. (50%) Johnston, Cliff (30% non-EPA) Chattopadhyay, Sandip (10% non-EPA) Boyd, Stephen (5% non-EPA) Khan, Bushra (5% non-EPA) NRMRL
S14SI0061	(1) Relating Ecosystem Services to Domains of Human Well-Being: Foundation for a U.S. Index Ecological Indicators, 28:79-90 (2) Development of Relative Importance Values as Contribution Weights for Evaluating Human Wellbeing: An Ecosystem Services Example Human Ecology, 41(4):631-641	Smith, Lisa (28%) Harwell, Linda (22%) Summers, Kevin (18%) Case, Jason (25% non-EPA) Smith, Heather (7% non-EPA) NHEERL
S14TF0064	Solute Transport in Solution Conduits Exhibiting Multi-Peaked Breakthrough Curves Journal of Hydrology / Print and Online Journal, 440-441:26-335	Field, Malcolm S. (80%) Leij, Feike J. (20% non-EPA) NCEA
S14TF0067	(1) Air quality variability near a highway in a complex urban environment Atmospheric Environment, 64:169-178 (2) RLINE: A Line Source Dispersion Model for Near-Surface Releases Atmospheric Environment, 77:748-756 (3) Estimating near-road pollutant dispersion: a model inter-comparison Transportation Research Part D, 25:93-105	Isakov, Vlad (15%) Heist, David (15%) Perry, Steven (15%) Snyder, Michelle (12%) Baldauf, Richard (12%) Hagler, Gayle (3%) Kimbrough, Sue (3%) Shores, Richard (3%) Owen, Robert Chris (3%) Venkatram, Akula (12% non-EPA) Black, Kevin (1% non-EPA) Brixey, Laurie (1% non-EPA) Arunachalam, Saravanan (1% non-EPA) Petersen, William (1% non-EPA) Carruthers, David (1% non-EPA) Hood, Christina (1% non-EPA) Stocker, Jenny (1% non-EPA) NERL

Nominations Recommended for Honorable Mention (No Monetary Award) -- Total of 29		
Nom.	Titles and Citations of Submitted Papers	EPA Authors and Nominating Organization
S14TF0070	(1) Determining the Spatial and Seasonal Variability in OM/OC Ratios across the United States Using Multiple Regression Atmospheric Chemistry and Physics, 11(6):2933-2949 (2) Simulating the Degree of Oxidation in Atmospheric Organic Particles Environmental Science & Technology, 46(1):331-339	Simon, Heather (45%) Bhave, Prakash V. (30%) Swall, Jenise (15%) Frank, Neil (5%) Malm, William C. (5% non-EPA) OAQPS
S14TF0071	Assessing the Long Term Impact of Phosphorus Fertilization on Phosphorus Loadings Using AnnAGNPS International Journal of Environmental Research and Public Health, 8(6):2181-2199	Yuan, Yongping (55%) Bingner, Ronald L. (15% non-EPA) Locke, Martin A. (10% non-EPA) Stafford, Jim (10% non-EPA) Theurer, Fred D. (10% non-EPA) NERL
S14TF0073	Fate and transport of elemental copper (Cu0) nanoparticles through porous media in the presence of organic materials Water Research, 46:2445-2456	Su, Chunming (50%) Jones, Edward (50% non-EPA) NRMRL
S14ER0075	Control of Pituitary Thyroid-Stimulating Hormone Synthesis and Secretion by Thyroid Hormones During Xenopus Metamorphosis Thyroid-Stimulating Hormone (TSH): Measurement of Intracellular, Secreted, and Circulating Hormone in Xenopus Laevis and Xenopus Tropicalis General and Comparative Endocrinology, 173(3):428-437	Degitz, Sigmund J. (25%) Sternberg, Robin (20%) Korte, Joseph J. (18%) Hornung, Michael (5%) Serrano, Jose (5%) Tietge, Joseph E. (5%) Thoemke, Kara R. (10% Non-EPA) Korte, Lisa (3% Non-EPA) Lillegard, Kathryn E. (3% Non-EPA) Moen, Scott M. (3% Non-EPA) Olson, Jessica M. (3% Non-EPA) NERL

Key to Acronyms used in the above Tables

CRL – Chicago Regional Laboratory

NCCT – Office of Research and Development (ORD) National Center for Computational Toxicology

NCEA – ORD National Center for Environmental Assessment

NCEE – National Center for Environmental Economics

NERL – ORD National Exposure Research Laboratory

NHEERL – ORD National Health and Environmental Effects Laboratory

NRMRL - ORD National Risk Management Research Laboratory
NVFEL - OAR's National Vehicle and Fuel Emissions Laboratory
OAQPS – Office of Air Quality Planning & Standards
OAR - Office of Air and Radiation