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[DATE]

EPA-SAB-10-xxx

The Honorable Lisa P. Jackson  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

Subject: SAB Recommendations for EPA's FY2010 Scientific and Technological  
Achievement Awards (STAA)

Dear Administrator Jackson:

The EPA Science Advisory Board (SAB) is pleased to transmit the SAB's recommendations for FY 2010 Scientific and Technological Achievement Awards (STAA). Each year since the program was established in 1980, the SAB has been asked by EPA's Office of Research and Development (ORD) to review EPA's nominated scientific papers and make recommendations for awards. We are pleased to continue our participation on this important program.

This year, ORD submitted a total of 145 nominations comprised of 214 papers in 14 science and technology categories for review by the SAB STAA Committee. Seventeen of these nominations were for a category entitled "EPA Project and Research Reports." ORD requested the STAA Committee to undertake a pilot study this year reviewing EPA Project and Research Reports as part of the traditional STAA review process. ORD instituted this new category as a pilot to determine the feasibility of expanding the number of high-quality EPA supported publications that are eligible for STAA nomination beyond those published in peer-reviewed journals. After careful deliberation at the June 28-30, 2010 closed meeting, the STAA Committee has elected to not undertake this pilot project. The Committee, however, recommends that the Agency use or establish other mechanisms to recognize the authors of major EPA reports that advance the scientific knowledge critical to EPA's mission. Committee members unanimously believe that it is critical for the excellent science produced within the Agency to be brought to the attention of the scientific community at large, and that the best way to accomplish that is to encourage Agency scientists and engineers to publish their work in the archival peer-reviewed literature. This process is in accord with the purpose of the STAA Committee, which is to evaluate the scientific value of the peer-reviewed literature produced by Agency scientists and engineers and to recommend the most exemplary contributions for Agency recognition. In fact, at least one section of EPA's *Integrated Science Assessment for Particulate Matter* was submitted as a review article to a scientific journal. Further, the Committee is concerned that review of EPA

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1 reports that have policy components is generally outside the purview of this SAB committee and  
2 could conflict with other SAB review activities associated with these reports.

3  
4 Of the remaining 128 nominations, the SAB recommends 61 nominations for monetary  
5 awards and another 33 deserving of honorable mention. Of the nominations recommended for  
6 monetary awards, 5 were recommended for Level I, the highest award; 14 for Level II; and 42 for  
7 Level III awards.

8  
9 To facilitate the SAB review of future STAA nominations, the SAB also recommends that  
10 the Agency: 1) increase efforts to ensure that submissions of nominations adhere to existing  
11 STAA program guidelines; 2) properly categorize the nominations; 3) discourage submission of  
12 multiple nominations of papers involving the same EPA author(s) on similar topical areas; and 4)  
13 discourage submission of nominations from standards-setting organizations.

14  
15 The SAB applauds the Agency's public recognition of the scientific work of EPA  
16 scientists and engineers through publication in the peer-reviewed literature. This promotes the  
17 sound science and high quality research that bolsters EPA's mission. Thank you for providing the  
18 SAB with the opportunity to assist the Agency with this important program. The SAB looks  
19 forward to reviewing the FY 2011 nominations.

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22 Sincerely,

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25  
26 Dr. Deborah L. Swackhamer, Chair  
27 EPA Science Advisory Board

28 Dr. Taylor Eighmy, Chair  
29 SAB Scientific and Technological  
30 Achievement Awards Committee

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**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 necessarily 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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**U.S. Environmental Protection Agency  
Science Advisory Board  
Scientific and Technological Achievement Awards (STAA) Committee**

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**Reid Lifset**, Associate Director of the Industrial Environmental Management Program and Resident Fellow in Industrial Ecology, School of Forestry and Environmental Studies, Yale University, New Haven, CT

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1 **Dr. Randy Maddalena**, Scientist, Environmental Energy Technologies Division, Lawrence  
2 Berkeley National Laboratory, Berkeley, CA

3  
4 **Dr. Paulette Middleton**, Creator and President, Panorama Pathways, Boulder, CO

5  
6 **Dr. Fred J. Miller**, Independent Consultant, Fred J. Miller and Associates LLC, Cary, NC

7  
8 **Dr. John R. Smith**, Division Manager, Environmental Science and Sustainable Technology,  
9 Alcoa Inc., Alcoa Center, PA

10  
11 **Dr. Robert Twiss**, Professor of Environmental Planning Emeritus, University of California,  
12 Berkeley, Berkeley, CA

13  
14 **Dr. Yousheng Zeng**, Air Quality Services Director, Providence Engineering and Environmental  
15 Group LLC, Baton Rouge, LA

16  
17 **Dr. Barbara Zielinska**, Research Professor and Director, Organic Analytical Laboratory,  
18 Division of Atmospheric Sciences, Desert Research Institute (DRI), Reno, NV

19  
20

21 **SCIENCE ADVISORY BOARD STAFF**

22 **Mr. Edward Hanlon**, Designated Federal Officer, 1200 Pennsylvania Avenue, NW  
23 1400R, Washington, DC, Phone: 202-564-2134, Fax: 202-565-2098 (hanlon.edward@epa.gov)

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**Dr. Claudia Benitez-Nelson**, Associate Professor, Department of Earth and Ocean Sciences and Marine Science Program, University of South Carolina, Columbia, SC

**Dr. Timothy Buckley**, Associate Professor and Chair, Division of Environmental Health Sciences, College of Public Health, The Ohio State University, Columbus, OH

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**Dr. Deborah Cory-Slechta**, Professor, Department of Environmental Medicine, School of Medicine and Dentistry, University of Rochester, Rochester, NY

**Dr. Terry Daniel**, Professor of Psychology and Natural Resources, Department of Psychology, School of Natural Resources, University of Arizona, Tucson, AZ

**Dr. George Daston**, Victor Mills Society Research Fellow, Product Safety and Regulatory Affairs, Procter & Gamble, Cincinnati, OH

**Dr. Costel Denson**, Managing Member, Costech Technologies, LLC, Newark, DE

**Dr. Otto C. Doering III**, Professor, Department of Agricultural Economics, Purdue University, W. Lafayette, IN

**Dr. David A. Dzombak**, Walter J. Blenko Sr. Professor of Environmental Engineering, Department of Civil and Environmental Engineering, College of Engineering, Carnegie Mellon University, Pittsburgh, PA

**Dr. T. Taylor Eighmy**, Vice President for Research, Office of the Vice President for Research, Texas Tech University, Lubbock, TX

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1 **Dr. Elaine Faustman**, Professor, Department of Environmental and Occupational Health  
2 Sciences, School of Public Health and Community Medicine, University of Washington, Seattle,  
3 WA

4  
5 **Dr. John P. Giesy**, Professor and Canada Research Chair, Veterinary Biomedical Sciences and  
6 Toxicology Centre, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

7  
8 **Dr. Jeffrey Griffiths**, Associate Professor, Department of Public Health and Community  
9 Medicine, School of Medicine, Tufts University, Boston, MA

10  
11 **Dr. James K. Hammitt**, Professor, Center for Risk Analysis, Harvard University, Boston, MA

12  
13 **Dr. Rogene Henderson**, Senior Scientist Emeritus, Lovelace Respiratory Research Institute,  
14 Albuquerque, NM

15  
16 **Dr. Bernd Kahn**, Professor Emeritus and Associate Director, Environmental Radiation Center,  
17 School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA

18  
19 **Dr. Agnes Kane**, Professor and Chair, Department of Pathology and Laboratory Medicine,  
20 Brown University, Providence, RI

21  
22 **Dr. Nancy K. Kim**, Senior Executive, Health Research, Inc., Troy, NY

23  
24 **Dr. Catherine Kling**, Professor, Department of Economics, Iowa State University, Ames, IA

25  
26 **Dr. Kai Lee**, Program Officer, Conservation and Science Program, David & Lucile Packard  
27 Foundation, Los Altos, CA (Organizational affiliation provided for identification purposes only)

28  
29 **Dr. Cecil Lue-Hing**, President, Cecil Lue-Hing & Assoc. Inc., Burr Ridge, IL

30  
31 **Dr. Floyd Malveaux**, Executive Director, Merck Childhood Asthma Network, Inc., Washington,  
32 DC

33  
34 **Dr. Lee D. McMullen**, Water Resources Practice Leader, Snyder & Associates, Inc., Ankeny, IA

35  
36 **Dr. Judith L. Meyer**, Distinguished Research Professor Emeritus, Odum School of Ecology,  
37 University of Georgia, Lopez Island, WA

38  
39 **Dr. Jana Milford**, Professor, Department of Mechanical Engineering, University of Colorado,  
40 Boulder, CO

41  
42 **Dr. Christine Moe**, Eugene J. Gangarosa Professor, Hubert Department of Global Health, Rollins  
43 School of Public Health, Emory University, Atlanta, GA

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- 1 **Dr. Eileen Murphy**, Manager, Division of Water Supply, New Jersey Department of  
2 Environmental Protection, Trenton, NJ  
3
- 4 **Dr. Duncan Patten**, Research Professor, Hydroecology Research Program , Department of Land  
5 Resources and Environmental Sciences, Montana State University, Bozeman, MT  
6
- 7 **Dr. Stephen Polasky**, Fesler-Lampert Professor of Ecological/Environmental Economics,  
8 Department of Applied Economics, University of Minnesota, St. Paul, MN  
9
- 10 **Dr. Stephen M. Roberts**, Professor, Department of Physiological Sciences, Director, Center for  
11 Environmental and Human Toxicology, University of Florida, Gainesville, FL  
12
- 13 **Dr. Amanda Rodewald**, Associate Professor, School of Environment and Natural Resources,  
14 The Ohio State University, Columbus, OH  
15
- 16 **Dr. Joan B. Rose**, Professor and Homer Nowlin Chair for Water Research, Department of  
17 Fisheries and Wildlife, Michigan State University, East Lansing, MI  
18
- 19 **Dr. Jonathan M. Samet**, Professor and Flora L. Thornton Chair, Department of Preventive  
20 Medicine, University of Southern California, Los Angeles, CA  
21
- 22 **Dr. James Sanders**, Director and Professor, Skidaway Institute of Oceanography, Savannah, GA  
23
- 24 **Dr. Jerald Schnoor**, Allen S. Henry Chair Professor, Department of Civil and Environmental  
25 Engineering, Co-Director, Center for Global and Regional Environmental Research, University of  
26 Iowa, Iowa City, IA  
27
- 28 **Dr. Kathleen Segerson**, Professor, Department of Economics, University of Connecticut, Storrs,  
29 CT  
30
- 31 **Dr. V. Kerry Smith**, W.P. Carey Professor of Economics , Department of Economics , W.P  
32 Carey School of Business , Arizona State University, Tempe, AZ  
33
- 34 **Dr. Herman Taylor**, Director, Principal Investigator, Jackson Heart Study, Jackson, MS  
35
- 36 **Dr. Barton H. (Buzz) Thompson, Jr.**, Robert E. Paradise Professor of Natural Resources Law at  
37 the Stanford Law School and Perry L. McCarty Director, Woods Institute for the Environment,  
38 Stanford University, Stanford, CA  
39
- 40 **Dr. Paige Tolbert**, Professor and Chair, Department of Environmental Health, Rollins School of  
41 Public Health, Emory University, Atlanta, GA  
42
- 43 **Dr. Thomas S. Wallsten**, Professor and Chair, Department of Psychology, University of  
44 Maryland, College Park, MD

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1

2 **Dr. Robert Watts**, Professor of Mechanical Engineering Emeritus, Tulane University, Annapolis,  
3 MD

4

5

6 **SCIENCE ADVISORY BOARD STAFF**

7 **Dr. Angela Nugent**, Designated Federal Officer, 1200 Pennsylvania Avenue, NW  
8 1400F, Washington, DC, Phone: 202-564-2218, Fax: 202-565-2098 (nugent.angela@epa.gov)

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## 1. BACKGROUND

EPA's Scientific and Technological Achievement Awards (STAA) was established in 1980 to recognize Agency's scientists and engineers who published their technical work in peer-reviewed literature. 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 for awards. In November 2009, ORD's Acting Assistant Administrator Mr. Lek Kadeli announced the call for EPA nominations for the 2010 STAA program (Attachment 1). In April 2010, ORD submitted 145 nominations for 2010 STAA awards to the SAB Staff Office. ORD grouped the nominations into fourteen science and technology categories and screened them for conformance with EPA's *STAA Nomination Procedures and Guidelines*, which describes the award levels, eligibility criteria, and the criteria the SAB should use to evaluate the nominations for awards. The topical categories for nominations were: Control Systems & Technology, Ecological Research, Energy and the Environment, Environmental Policy and Decisionmaking Studies, Health Effects Research and Human Health Risk Assessment, Homeland Security, Industry and the Environment, Integrated Risk Assessment, Monitoring & Measurement Methods, Other Environmental Research, Review Articles, Risk Management and Ecosystem Restoration, Transport and Fate, and U.S. EPA Project and Research Reports. The number of 2010 STAA nominations sorted by topic category submitted by ORD were as follows:

Topic	Number of Nominations
Control Systems and Technology	8
Ecological Research	22
Energy and the Environment	2
Environmental Policy and Decisionmaking Studies	1
Health Effects Research and Human Health Risk Assessment	32
Homeland Security	3
Industry and the Environment	3
Integrated Risk Assessment	5
Monitoring and Measurement Methods	10
Other Environmental Research	7
Review Articles	13
Risk Management and Ecosystem Restoration	4
Transport and Fate	18
U.S. EPA Project and Research Reports	17

Of the 145 nominations, 17 nominations fall under the category entitled "EPA Project and Research Reports." ORD's National Center for Environmental Research (NCER) Director Dr. William Sanders requested of the STAA Committee Chair that the STAA Committee undertake a pilot study this year reviewing EPA Project and Research Reports as part of the traditional STAA review process (Attachment 2). ORD instituted this new category as a pilot to determine the feasibility of expanding the number of high-quality EPA supported publications that are eligible for STAA nomination.

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

- 1) 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.
- 2) 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.
- 3) 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.
- 4) Honorable Mention - The Agency 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 Committee believes is too preliminary to warrant an award recommendation at this time.

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**2. SAB REVIEW PROCEDURE**

In response to ORD’s request, the SAB Staff Office augmented the 2009-2011 SAB STAA Committee with additional experts to review the FY2010 STAA nominations. The augmented 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). Where conflicts or potential conflicts of interest existed, Committee members recused themselves from the review and discussion process for certain nominations as appropriate.

The SAB review consisted of a two-step process: an initial review of each nomination, followed by a Committee discussion of all nominations at a closed meeting on June 28-30, 2010 in Washington, DC. The meeting was closed to the public to protect the personal privacy of the authors. STAA Committee members reviewed 128 nominations. Seventeen pilot project nominations in the category of “U.S. EPA Project and Research Reports” were deferred for discussion at the meeting. The initial review was conducted by 2 to 4 members. Prior to the meeting, Committee members provided their individual initial ratings of the nominations based on EPA’s award criteria as described under Section 1. At the June meeting, the Committee first discussed the appropriateness for SAB review of the 17 pilot project nominations. The Committee then discussed each of the 128 nominations and reached consensus on the evaluations and recommendations for awards. The Committee combined 14 nominations into 7 nominations due to topic similarities. In addition, the Committee also discussed administrative recommendations for improving the 2010 STAA nomination process.

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### 3. AWARD RECOMMENDATIONS

After careful deliberation at the June 28-30, 2010 closed meeting, the STAA Committee has elected to not undertake the pilot project to review the 17 EPA Project and Research Reports as part of the traditional STAA review process. The Committee, however, recommends that the Agency use or establish other mechanisms to recognize the authors of major EPA reports that advance the scientific knowledge critical to EPA's mission. Committee members unanimously believe that the best means for EPA to promote good science produced within the Agency with the scientific community at large is to encourage Agency scientists and engineers to publish their work in the archival peer-reviewed literature. This process is in accord with the purpose of the STAA Committee, which is to evaluate the scientific value of the peer-reviewed literature produced by Agency scientists and engineers and provide the highest level of review for Agency recognition. Further, the Committee is concerned that review of EPA reports that have policy components is generally outside the purview of this SAB committee and could conflict with other SAB review activities associated with these reports.

The Table below summarizes the awards by year since 2000, including the recommendations for 2010. The Committee recommended 61 nominations for 2010 STAA monetary awards and another 33 for honorable mention. Of the works recommended for monetary awards, 5 were recommended for Level I, 14 for Level II, and 42 for Level III. Appendix A lists the recommended monetary awards and nominations that deserve an Honorable Mention. The final rankings were agreed to at the meeting by Committee consensus.

**Comparison of Award Recommendations over Time**

<b>Award Level</b>	<b>FY 2000</b>	<b>FY 2001</b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010*</b>
<b>Nominations Reviewed</b>	102	126	140	136	146	110	90	140	130	109	121*
<b>Level I</b>	0	2	4	7	6	3	5	5	5	3	5
<b>Level II</b>	5	11	7	18	13	6	11	13	16	22	14
<b>Level III</b>	36	29	26	29	32	30	29	37	30	31	42
<b>Honorable Mention</b>	20	21	39	33	37	31	26	45	43	25	33
<b>Not Recommended</b>	41	63	64	49	58	40	19	40	36	28	27
<b>Not Eligible</b>	0	0	0	0	0	0	0	0	0	0	3**

\* In 2010, the SAB STAA combined fourteen nominations into seven nominations due to topic similarities.

\*\* Duplicate nominations.

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**4. ADMINISTRATIVE RECOMMENDATIONS**

The Committee appreciates EPA's efforts to satisfactorily implement recommendations from last year's report to the Administrator. In particular, the Committee identified significant improvements in the justifications for awards provided within the nominations regarding the breadth and importance of submitted papers and value and relevance of the work to the Agency's mission.

During the June 28-30, 2010 meeting, the Committee identified four aspects of the nomination process that might be improved in future years: 1) increase efforts to ensure that submissions of nominations adhere to existing STAA program guidelines; 2) properly categorize the nominations; 3) discourage submission of multiple nominations of papers involving the same EPA author(s) on similar topical areas; and 4) discourage submission of nominations from standards-setting organizations. These observations are offered with the hope that the nomination process can continue to ensure STAA's fidelity towards recognizing outstanding science.

*Increase efforts to ensure that submissions of nominations adhere to existing STAA program guidelines*

The 2010 STAA Committee has noted many examples where greater attention to nomination guidelines would be beneficial to the review process. For example, there were:

- (a) Duplication of nominations;
- (b) Resubmission of previous year's nominations; and
- (c) Omission of information on prior STAA awards.

In addition, the Committee Members had concerns about the need for the nominator(s) to verify the authorship of nominations. For example, nominations were authored by former employees. In other cases, the authors were not EPA employees when the work was conducted.

*Properly categorize the nominations, and discourage submission of multiple nominations of papers involving the same EPA author(s) on similar topical areas*

The Committee strongly believes that some papers are grouped and submitted under different subject categories in an attempt to maximize opportunities for cash awards. It is increasingly common to receive a number of nominations of papers that have similar justifications, address themes and/or methods that are essentially the same, have the same or similar groups of authors, and support closely related conclusions. The current nomination form restricts each nomination to a maximum of 3 papers per nomination, and requires that the nomination be categorized within a specific topic. Some prolific researchers had several nominations containing 3 papers each, and all papers within these nominations were topically similar. However, these nominations were inappropriately categorized into different topic areas.

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1 It was often difficult for the Committee to discern significant differences in intellectual and  
2 scientific contributions between these nominations, and confusing for the Committee to find such  
3 papers spread among many categories. It was also difficult for the Committee members to  
4 identify similar papers that were nominated in previous years since an index of previous  
5 nominations and awards was not available to the Committee.

6  
7 The Committee strongly discourages the practice of grouping similar papers and  
8 submitting groups to different categories. The Committee bases its recommendations for STAA  
9 Program awards on merit and does not base recommendations on the allocation or distribution of  
10 awards by subject category. The Committee uses these categories solely to assign nominations  
11 for review and to consider workload of STAA Committee members relative to STAA Committee  
12 composition.

13  
14 As noted previously, in both the Committee's 2008 and 2009 reports to the Administrator,  
15 the Agency should discourage the practice of submission of multiple nominations of papers  
16 involving the same EPA author(s) on similar topical areas. The Agency should also develop an  
17 index of STAA papers that have been nominated during the previous 5 years. The index should  
18 be updated annually and provided to the SAB Staff Office with the nominated papers. In  
19 addition, the Committee recommends that the Agency annually develop a table that alphabetically  
20 lists all researchers nominated more than once for that year's awards, and provide the table to the  
21 SAB Staff Office with the index. The table should identify all nominations and paper titles that  
22 researcher helped to author.

23  
24 *Discourage submission of nominations from standards-setting organizations*

25  
26 Nominations of methods papers published by standards-setting organizations are  
27 commendable but difficult to ascertain authorship contribution. The Committee recommends that  
28 the nomination guidelines be updated to discourage nomination of methods papers published by  
29 standards-setting organizations.

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**Attachment 1**

**November 2009 Memoranda from ORD's Acting Assistant Administrator Mr. Lek Kadeli announced the call for EPA nominations for the 2010 STAA program**

**November 18, 2009**

**MEMORANDUM**

**SUBJECT:** The 2010 Scientific and Technological Achievement Awards (STAA) Program

**FROM:** Lek Kadeli /signed/  
Assistant Administrator (8101R)

**TO:** Assistant Administrators  
Associate Administrators  
Regional Administrators  
ORD Center/Laboratory Directors

It is a pleasure to announce this year's call for nominations for the 2010 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 [Nomination.STAA@EPA.gov](mailto:Nomination.STAA@EPA.gov).

I am also pleased to announce that, in an effort to encourage greater participation from across the Agency, the 2010 Scientific and Technological Achievement Awards (STAA) program will expand the types of eligible publications on a pilot basis. Research and Project Reports from across EPA will be eligible for STAA submission in 2010. Other aspects of the STAA program, such as the evaluation criteria, are not expected to significantly change.

Attached are (1) nomination procedures and guidelines, (2) program schedule, and (3) nomination forms. Official 2010 nomination forms are available for your convenience in MS Word and screen fillable Portable Document Format (PDF) at <http://es.epa.gov/ncer/staa/>. All nominations must be received no later than midnight ET Thursday, January 14, 2010. Instructions for completion and electronic submission of nomination packages are attached. Should questions arise, please contact Dr. Thomas O'Farrell at (202) 343-9639 or [O'Farrell.Thomas@epa.gov](mailto:O'Farrell.Thomas@epa.gov).

cc: EPA Science Advisory Board  
EPA Program Offices  
EPA Regional Offices

**08/20/2010 Draft**  
**DO NOT CITE OR QUOTE**

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1 **November 18, 2009**

2  
3 **EPA SEEKING APPLICATIONS FOR 2010 STAA AWARDS**

4  
5 **MEMORANDUM**

6  
7 **SUBJECT:** The 2010 Scientific and Technological Achievement Awards (STAA) Program

8  
9 **FROM:** Lek Kadelic /signed/  
10 Assistant Administrator

11  
12 **TO:** All EPA Employees

13  
14 I am pleased to issue this year's call for nominations for the EPA's prestigious 2010  
15 Scientific and Technological Achievement Awards (STAA). Each year, EPA recognizes  
16 outstanding papers written by the Agency's staff and published in scientific and technical journals.  
17 STAA is open to all EPA employees, judged by the EPA's Science Advisory Board (SAB), and  
18 managed by the Office of Research and Development.

19  
20 I am also pleased to announce that, in an effort to encourage greater participation from  
21 across the Agency, the 2010 STAA program will expand the types of eligible publications on a  
22 pilot basis. Research and Project Reports from across EPA will be eligible for STAA submission  
23 in 2010. Other aspects of the STAA program, such as the evaluation criteria, will not  
24 significantly change.

25  
26 Nominations can be submitted in the following categories:

- 27  
28 - Control Systems and Technology  
29 - Ecological Research  
30 - Health Effects Research and Human Health Risk Assessment  
31 - Monitoring and Measurement Methods  
32 - Transport and Fate  
33 - Review Articles  
34 - Risk Management and Ecosystem Restoration  
35 - Integrated Risk Assessment  
36 - Environmental Policy and Decision-Making Studies  
37 - Homeland Security  
38 - Industry and the Environment  
39 - Energy and the Environment  
40 - Other Environmental Research  
41 - U.S. EPA Project and Research Reports  
42

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1 STAA winners are eligible for monetary awards. In addition, winners are recognized each  
2 summer at the ORD Awards Ceremony.

3  
4 This year's nominations will be accepted via electronic submission to  
5 Nominations.STAA@epa.gov. You can find the nomination forms and guidelines at  
6 [www.epa.gov/ncer/staa/forms.html](http://www.epa.gov/ncer/staa/forms.html). Nominations will be accepted until midnight ET on  
7 Thursday, January 14, 2010. Additional information about the STAA program can be found at  
8 [www.epa.gov/ncer/staa](http://www.epa.gov/ncer/staa). Should questions arise, please contact Thomas O'Farrell at (202) 343-  
9 9639 or O'Farrell.Thomas@EPA.gov.

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**Attachment 2**

**May 2009 Letter from National Center for Environmental Research (NCER) Director Dr. William Sanders to STAA Committee Chair on Pilot Project**

**May 28, 2010**

Dr. T. Taylor Eighmy  
Vice President for Research  
Office of the Vice President for Research  
Texas Tech University  
Box 41075  
Lubbock, TX 79409-1075

Dear Dr. Eighmy:

EPA would like to request your help in making the Science and Technology Achievement Awards (STAA) program an even more effective way to acknowledge the excellence of EPA science.

For many years, government agencies, academics, the public and the broader scientific community have recognized EPA for its outstanding environmental research. We believe that by identifying and recognizing EPA's science achievements, we can attract, keep, and motivate our scientific workforce and ensure that we emphasize scientific quality and relevance. The STAA program is an important component of EPA's efforts to achieve its science goals and reward our scientists for their work. In recent years, it has become apparent that research reports are some of the most important science documents produced by Agency scientists and, at this point, these reports are ineligible for consideration in the STAA competition. We know that research reports play a significant role in moving our science efforts forward. For this reason EPA feels that research reports should be eligible for the 2001 STAA competition.

Because including research reports in the STAA competition is a new idea, we want to make this part of a one year pilot program. Continuing beyond 2010, will be largely based on the findings and results of the 2010 effort. As part of the pilot, EPA will include a disclaimer that reserves our right to discontinue or modify the program, primarily to ensure that any modifications deemed essential to the pilot's success can be introduced at any time. To continue to ensure that no materials submitted are resubmissions, research reports are ineligible for STAA nomination if a portion of the report has been separately published and submitted to a prior STAA competition. Alternatively, no publication that has derived from a STAA nominated research report may be submitted to a future STAA competition. Furthermore, nominated publications in this research category must undergo both internal and external-to-EPA peer reviews.

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1 Other aspects of the STAA program, such as the evaluation criteria, will not significantly  
2 change. No additional or targeted funds will be made available to fund research report awards.  
3 We greatly appreciate the efforts of the SAB in helping EPA with this important effort and we  
4 look forward to hearing your thoughts on the effectiveness of this pilot effort. Thank you again  
5 for your help in improving the excellence of the STAA program.  
6

7  
8 Sincerely Yours,

9  
10 */signed/*

11  
12 William H. Sanders, III, Dr. P.H.  
13 Director  
14

15  
16 cc: Vanessa Vu  
17 Sherry Sterling  
18 Thomas O'Farrell  
19

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**Appendix A - Nominations Recommended for Awards**

Note: The Appendix A list of Recommendations for 2009 STAA Program Awards is not provided for the Quality Review by the Chartered SAB. This list will be appended to the final letter to the Administrator after completion of the quality review.