



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

**OFFICE OF THE ADMINISTRATOR
SCIENCE ADVISORY BOARD**

MEMORANDUM

SUBJECT: Preparations for Chartered Science Advisory Board (SAB) December 4-5, 2013
Discussions of EPA Planned Agency Actions and their Supporting Science in the Spring
2013 Regulatory Agenda

DATE: November 12, 2013

FROM: James R. Mihelcic, Chair, SAB Work Group on EPA Planned Actions for SAB
Consideration of the Underlying Science

TO: Members of the Chartered SAB and SAB Liaisons

The Chartered SAB will discuss whether to review the adequacy of the science supporting planned regulatory actions announced in the Spring 2013 Regulatory Agenda at its December 4-5, 2013 meeting. An SAB Work Group was charged with identifying actions for consideration by the Chartered SAB. This memorandum provides background on this activity, a short description of the process for identifying actions for SAB consideration, a summary of the process used by the Work Group, and the Work Group's recommendations on the planned actions and improvements to the process.

Background

The Environmental Research, Development, and Demonstration Authorization Act of 1978 (ERDDAA) requires the EPA to make available to the SAB proposed criteria documents, standards, limitations, or regulations provided to any other Federal agency for formal review and comment, together with relevant scientific and technical information on which the proposed action is based. The SAB may then make available to the Administrator, within the time specified by the Administrator, its advice and comments on the adequacy of the scientific and technical basis of the proposed action.

In 2012, EPA senior leadership agreed on a process to provide the Board with information about planned agency actions in the pre-proposal stage, so that the agency could receive advice from the SAB in the regulatory process when SAB advice could be meaningful. EPA's current process is to provide the SAB with information about the publication of the semi-annual regulatory agenda and to provide short descriptions of major planned actions that are not yet proposed but appear in the semi-annual regulatory agenda (Attachment A). This process supplements the EPA's process for program and regional offices to identify scientific issues that might be appropriate for SAB consideration.

Summary of the process used by the SAB Work Group

The SAB Work Group followed the process established by the Agency and the process adopted by the Chartered SAB after completing its review of the Fall 2012 Unified (Regulatory) Agenda and Regulatory Plan (Attachment B). The current SAB review began when the EPA Office of Policy informed the SAB Staff Office that the Spring 2013 Unified (Regulatory) Agenda and Regulatory Plan had been published on July 3, 2013. This semi-annual regulatory agenda is available at <http://www.reginfo.gov/public/>.

An SAB Work Group was formed in August 2013 and consisted of SAB members with broad expertise in scientific and technological issues related to the proposed actions. The Work Group consisted of Drs. James R. Mihelcic (chair), Taylor Eighmy, R. William Field, H. Christopher Frey, Madhu Khanna, and Peter S. Thorne.

On August 15, 2013, the Work Group received short descriptions of the major planned actions that were not yet proposed and are listed in the July 3, 2013 semi-annual regulatory agenda. The Work Group held a planning work session via teleconference on September 4, 2013 to identify additional information needed to assist them in identifying priority actions for SAB advice and comment.

SAB Staff facilitated a fact finding teleconference as requested by the Work Group on September 26, 2013. The EPA Office of Air and Radiation and the Department of Energy's National Energy Technology Laboratory (NETL) staff provided additional information requested after the meeting. Attachment C provides a summary of the meeting and the additional information provided by EPA and NETL. The Work Group exchanged information via email and held a teleconference on November 4, 2013 to prepare the recommendations in this memorandum.

The Work Group considered actions in the July 2013 semi-annual regulatory agenda that were identified by the EPA as "major actions." The Work Group considered several factors when assessing each proposed major action, i.e., whether the action:

- already had a planned review by the SAB or some other high level external peer review [e.g., National Academy of Sciences, Clean Air Scientific Advisory Committee, Federal Insecticide, Fungicide and Rodenticide (FIFRA) Scientific Advisory Panel];
- was primarily administrative (i.e., involved reporting or record keeping);
- was an extension of an existing initiative;
- was characterized by EPA as an influential scientific or technical work product having a major impact, or involved precedential, novel, and/or controversial issues;
- considered scientific approaches new to the agency;
- addressed an area of substantial uncertainty;
- involved major environmental risks;
- related to an emerging environmental issue; or
- exhibited a long-term outlook.

Work Group Recommendations Regarding Planned EPA Actions of Interest to the SAB

Attachment D provides information on the 11 major actions considered by the Work Group. This attachment includes brief agency descriptions of the planned actions, the Work Group recommendations and supporting rationales.

Of the 11 major actions considered based on the information received from the EPA, the Work Group recommends that 2 actions merit SAB consideration.

- The SAB Work Group recommends that the SAB review the science supporting the Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units (2060-AQ91). This proposed action was signed by Administrator McCarthy on September 20, 2013 and released to the public during the Work Group's deliberations. EPA stated that the science and technical bases of this action do not rely on new science, are based on the Best System of Emission Reduction, and the action is technology based. In contrast, the Work Group notes that this action involves precedential and novel issues that rely on new technologies and science for carbon capture and storage (CCS). EPA Staff explained that the CCS provisions would only be binding to coal fired EGUs and are based on three examples of implementing partial CCS. They stated that the strong demonstration these facilities make for the technology (See Attachment C) and this proposal relies on existing sequestration studies and reporting requirements for carbon capture. The Work Group finds that the scientific and technical basis for carbon storage provisions is new science and the rulemaking would benefit from additional review. The specific technical and scientific matters that can be examined as part of the discussion include the scientific basis to develop separate standards for new gas-fired and coal-fired units, carbon capture and storage as a Best System of Emission Reductions for coal-fired plants and underlying scientific assumptions around carbon pollution emissions technological controls.

The EPA has stated that U.S. Department of Energy National Energy Technology Laboratory (NETL) studies¹ as well as existing EGUs under construction and in advanced stages of development were used as the basis for the BSER assumptions for new natural gas and coal fuel sources for new EGUs. EPA staff explained that the NETL studies were all peer reviewed and EPA did not conduct additional peer review(s). However, based on additional information provided to the Work Group from NETL, the peer review appears to be inadequate.

- The SAB workgroup recommends that SAB review the scientific and technical basis for the Revision of 40 CFR Part 192--Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching Processing Facilities (2060-AP43) when details of the proposed rule are available. Although the SAB provided advice to the agency in

¹ Volume 1 of the series – “Cost and Performance Baseline for Fossil Energy Power Plants, Volume 1: Bituminous Coal and Natural Gas to Electricity” (and subsequent updates) – available at http://www.netl.doe.gov/energy-analyses/baseline_studies.html

August 2011 report "Cost and Performance of PC and IGCC Plants for a Range of Carbon Dioxide Capture" which modified the CO₂ capture rates for select cases presented in the "Cost and Performance Baseline for Fossil Energy Plants" did not undergo peer review. That report can be found here: <http://www.netl.doe.gov/energy-analyses/refshelf/PubDetails.aspx?Action=View&PubId=396>

2012 (*Advisory on EPA’s draft Technical Report entitled Considerations Related to Post Closure Monitoring of Uranium In-Situ Leach/In-Situ Recovery (ISL/ISR) Sites EPA-SAB-12-2005*), this action is still under development and the Work Group could not determine from the limited information provided by the agency, the adequacy of the scientific and technical basis for this important planned action. The Work Group recommends that the SAB evaluate the proposed rule and at that time determine if commentary is appropriate to provide to the Administrator.

Table 1 summarizes the 11 planned actions by name and Regulation Identifier Number (RIN) and the Work Groups recommendations.

Table 1: Summary of Proposed Actions that the SAB Work Group considered for additional SAB Comment on the Supporting Science

RIN ¹	Planned Action Title	Workgroup recommendation
2060-AR76	Renewable Fuel 2014 Volume Standards	No further SAB consideration is merited
2060-AQ44	Review of the National Ambient Air Quality Standards for Lead	No further SAB consideration is merited. This action was reviewed by CASAC
2060-AP69	NESHAP: Brick and Structural Clay Products and Clay Products	No further SAB consideration is merited.
2060-AR28	PSD for Particulate Matter Less Than 2.5 Micrometers (PM2.5)—Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration: Reconsideration	No further SAB consideration is merited.
2060-AP26	National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart W: Standards for Radon Emissions From Operating Uranium Mill Tailings: Review	No further SAB consideration is merited.
2060-AP43	Revision of 40 CFR Part 192--Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching Processing Facilities	The Work Group recommends that the Chartered SAB review this Action
2060-AQ48	Implementation Rule for 2012 PM2.5 NAAQS	No further SAB consideration is merited.
2060-AR33	Greenhouse Gas New Source Performance Standard for Electric Generating Units-Emission Guidelines for Existing Sources	No further SAB consideration is merited.
2060-AQ91	Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units	The Work Group recommends that the Chartered SAB review this Action

Table 1: Summary of Proposed Actions that the SAB Work Group considered for additional SAB Comment on the Supporting Science

RIN ¹	Planned Action Title	Workgroup recommendation
2070-AJ22	Pesticides; Agricultural Worker Protection Standard Revisions	No further SAB consideration is merited. The FIFRA SAP waived its review of this proposed action.
2070-AJ38	Polychlorinated Biphenyls (PCBs); Reassessment of Use Authorizations	No further SAB consideration is merited.

1. The RIN (Regulation Identification Number) is a hyperlink to the semi-annual Regulatory Agenda Spring 2013 web page for each planned action.

Work Group Recommendations Regarding Improvements to the Process for Identifying EPA Planned Actions for SAB Consideration

The Work Group thanks the EPA for providing information for consideration but emphasizes that the SAB requires more complete and timely information from the agency to make recommendations and decisions regarding the science supporting planned actions. To improve the process for future review of the semi-annual regulatory agenda, the SAB Work Group strongly recommends that EPA enhance descriptions of future planned actions by providing specific information on the peer review associated with the science basis for actions and more description of the scientific and technological bases for the actions. In reviewing the Spring 2013 Regulatory Agenda, there were several cases where key information about the planned action, its supporting science and peer review were provided only after specific work group requests. EPA should provide such information in the initial descriptions provided to the work group.

Effective SAB evaluation of planned actions requires the agency to characterize:

- All relevant key information associated with the planned action;
- The science supporting the regulatory action. If there is new science to be used, provide a description of what is being developed. If the agency is relying on existing science, provide a short description.
- The nature of planned or completed peer review. To the extent possible, provide information about the type of peer review, the charge questions provided to the reviewers, how relevant peer review comments were integrated into the planned action, and information about the qualifications of the reviewer(s).

This SAB Work Group made several of these recommendations in March 2013. We request that the chartered SAB highlight to the Administrator the need for the Agency to provide more complete information to support future SAB decisions about the adequacy of the science supporting actions in future regulatory agendas.

Attachments

- Attachment A: Implementation Process for Identifying EPA Planned Actions for SAB Consideration
- Attachment B: Process for Chartered SAB Discussions of EPA Planned Actions and their Supporting Science
- Attachment C: Summary of the September 26, 2013 fact-finding teleconference, questions sent to National Program Offices at the SAB Work Group's request and the agency responses.
- Attachment D: Descriptions of Major EPA Planned Actions Identified in the July 2013 Semi-Annual Regulatory Agenda with SAB Work Group Recommendations.

Implementation Process for Identifying EPA Planned Actions for SAB Consideration

Background on the EPA Process

- The Environmental Research, Development, and Demonstration Authorization Act of 1978 (ERDDAA, see p. 4))
 - Requires the EPA to make available to the SAB proposed criteria documents, standards, limitations, or regulations provided to any other Federal agency for formal review and comment together with relevant scientific and technical information in the possession of the agency on which the proposed action is based.
 - States that the Board may make available to the Administrator, within the time specified by the Administrator, its advice and comments on the adequacy of the scientific and technical basis of the proposed actions.
- In January 2012, Office of Policy Associate Administrator Michael Goo issued a memorandum to strengthen coordination with the SAB by providing the Board with information about *proposed* agency actions.
- In February 2012, SAB Staff developed an initial proposal to provide the SAB with information about *proposed* agency actions.
 - EPA Senior Leadership concluded that providing information to the SAB for consideration at the proposal stage was *too late* in the process for meaningful involvement.
- In March 2012, the SAB held a public meeting and discussed the Goo memo and a pilot to consider the science underlying four proposed rules identified by OAR (standards for air toxics from boilers and incinerators and greenhouse gas emissions and fuel economy standards for light-duty vehicles).
 - The SAB:
 - Did not identify any science topics related to the four proposed rules warranting SAB comment.
 - Noted that the proposal stage was *too late* in the process for meaningful input.
 - Discussed the need for adequate information on the underlying science for agency actions early in the process. Information beyond the information presented in the Semiannual Regulatory Agenda is needed for this purpose.
- On December 27, 2012, Associate Administrator Michael Goo, the Administrator's Science Advisor Glenn Paulson, and the SAB Office Director Vanessa Vu issued a memorandum (see p. 10) "Identifying EPA Planned Actions for Science Advisory Board (SAB) Consideration of the Underlying Science – Semi-annual Process" requiring EPA to provide short descriptions of *major planned actions that are not yet proposed* appearing in the semi-annual regulatory agenda
- This process supplements the Deputy Administrator's annual memorandum requesting program and regional offices to identify scientific issues that might be appropriate for SAB consideration.

- On January 30, 2013, EPA Program Offices will provide short descriptions of the *major planned actions that are not yet proposed* that appeared in December 21, 2012 semi-annual regulatory agenda (available at <http://www.reginfo.gov/public/>).

Proposed SAB Process

- The chartered SAB will meet twice a year to review the semi-annual regulatory agenda and descriptions of major planned actions to determine if the SAB wishes to identify any actions for additional attention where the Board may wish to provide “advice and comments on the adequacy of the scientific and technical basis of the proposed actions.”
 - Members of the SAB Work Group on EPA Planned Actions for SAB
Consideration of the Underlying Science will lead the discussion at the chartered SAB’s meeting.
- The SAB Staff will facilitate any additional fact finding requested prior to the meeting and work with EPA to schedule and manage the SAB process for actions where the SAB would like to provide advice and comments.
- The SAB Staff will manage the new semi-annual process for determining whether any planned EPA actions merit SAB advice and comment on the supporting science as part of the entire SAB operating plan (see Figure 1).

Figure 1: Two Major Processes for Identifying Advisory Activities for the SAB Operating Plan:

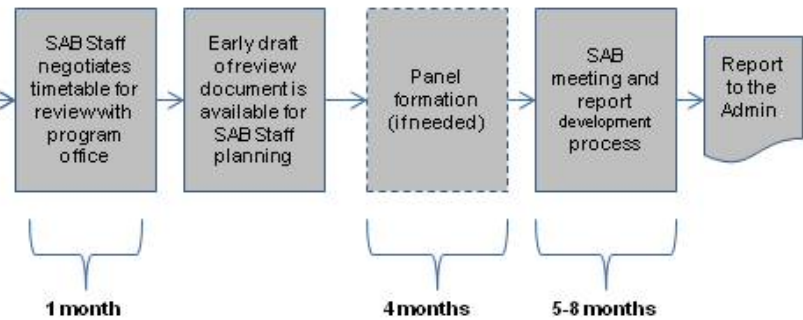
1) the historical process for identifying requests and 2) the new semi-annual process for determining whether any planned EPA actions merit SAB advice and comment on the supporting science

1) Historical process for identifying requests for the SAB

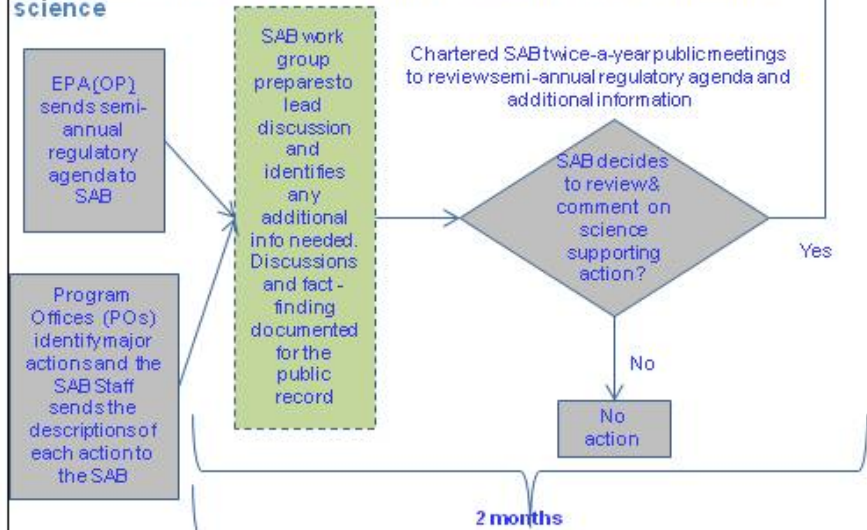


- EPA Office requests responding to annual Deputy Administrator memorandum
- Urgent requests from AAs/RAs

General process for managing SAB advisory activities



2) New semi-annual process for determining whether any planned EPA actions merit SAB advice and comment on the supporting science



12-15 months

**Environmental Research, Development, and Demonstration Authorization Act
[(ERDDAA), 42 U.S.C. 4365]**

TITLE 42--THE PUBLIC HEALTH AND WELFARE

CHAPTER 55--NATIONAL ENVIRONMENTAL POLICY

SUBCHAPTER III--MISCELLANEOUS PROVISIONS

Sec. 4365. Science Advisory Board

(a) Establishment; requests for advice by Administrator of Environmental Protection Agency and Congressional committees

The Administrator of the Environmental Protection Agency shall establish a Science Advisory Board which shall provide such scientific advice as may be requested by the Administrator, the Committee on Environment and Public Works of the United States Senate, or the Committee on Science, Space, and Technology, on Energy and Commerce, or on Public Works and Transportation of the House of Representatives.

(b) Membership; Chairman; meetings; qualifications of members

Such Board shall be composed of at least nine members, one of whom shall be designated Chairman, and shall meet at such times and places as may be designated by the Chairman of the Board in consultation with the Administrator. Each member of the Board shall be qualified by education, training, and experience to evaluate scientific and technical information on matters referred to the Board under this section.

(c) Proposed environmental criteria document, standard, limitation, or regulation; functions respecting in conjunction with Administrator

(1) The Administrator, at the time any proposed criteria document, standard, limitation, or regulation under the Clean Air Act [42 U.S.C. 7401 et seq.], the Federal

Water Pollution Control Act [33 U.S.C. 1251 et seq.], the Resource Conservation and Recovery Act of 1976 [42 U.S.C. 6901 et seq.], the Noise Control Act [42 U.S.C. 4901 et seq.], the Toxic Substances Control Act [15 U.S.C. 2601 et seq.], or the Safe Drinking Water Act [42 U.S.C. 300f et seq.], or under any other authority of the Administrator, is provided to any other Federal agency for formal review and comment, shall make available to the Board such proposed criteria document, standard, limitation, or regulation, together with relevant scientific and technical information in the possession of the Environmental Protection Agency on which the proposed action is based.

(2) The Board may make available to the Administrator, within the time specified by the Administrator, its advice and comments on the adequacy of the scientific and technical basis of the proposed criteria document, standard, limitation, or regulation, together with any pertinent information in the Board's possession.

(d) Utilization of technical and scientific capabilities of Federal agencies and national environmental laboratories for determining adequacy of scientific and technical basis of proposed criteria document, etc.

In preparing such advice and comments, the Board shall avail itself of the technical and scientific capabilities of any Federal agency, including the Environmental Protection Agency and any national environmental laboratories.

(e) Member committees and investigative panels; establishment; chairmanship

The Board is authorized to constitute such member committees and investigative panels as the Administrator and the Board find necessary to carry out this section. Each such member committee or investigative panel shall be chaired by a member of the Board.

(f) Appointment and compensation of secretary and other personnel; compensation of members

(1) Upon the recommendation of the Board, the Administrator shall appoint a secretary, and such other employees as deemed necessary to exercise and fulfill the Board's powers and responsibilities. The compensation of all employees appointed under this paragraph shall be fixed in accordance with chapter 51 and subchapter III of chapter 53 of title 5.

(2) Members of the Board may be compensated at a rate to be fixed by the President but not in excess of the maximum rate of pay for grade GS-18, as provided in the General Schedule under section 5332 of title 5.

(g) Consultation and coordination with Scientific Advisory Panel

In carrying out the functions assigned by this section, the Board shall consult and coordinate its activities with the Scientific Advisory Panel established by the Administrator pursuant to section 136w(d) of title 7.

(Pub. L. 95-155, Sec. 8, Nov. 8, 1977, 91 Stat. 1260; Pub. L. 96-569, Sec. 3, Dec. 22, 1980, 94 Stat. 3337; Pub. L. 103-437, Sec. 15(o), Nov. 2, 1994, 108 Stat. 4593; Pub. L. 104-66, title II, Sec. 2021(k)(3), Dec. 21, 1995, 109 Stat. 728.)

References in Text

The Clean Air Act, referred to in subsec. (c)(1), is act July 14, 1955, ch. 360, 69 Stat. 322, as amended, which is classified generally to chapter 85 (Sec. 7401 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 7401 of this title and Tables.

The Federal Water Pollution Control Act, referred to in subsec. (c)(1), is act June 30, 1948, ch. 758, as amended generally by Pub. L. 92-500, Sec. 2, Oct. 18, 1972, 86 Stat. 816, which is classified generally to chapter 26 (Sec. 1251 et seq.) of Title 33, Navigation and Navigable Waters. For complete classification of this Act to the Code, see Short Title note set out under section 1251 of Title 33 and Tables.

The Resource Conservation and Recovery Act of 1976, referred to in subsec. (c)(1), is Pub. L. 94-580, Oct. 21, 1976, 90 Stat. 2796, as amended, which is classified

generally to chapter 82 (Sec. 6901 et seq.) of this title. For complete classification of this Act to the Code, see Short Title of 1976 Amendment note set out under section 6901 of this title and Tables.

The Noise Control Act, referred to in subsec. (c)(1), probably means the Noise Control Act of 1972, Pub. L. 92-574, Oct. 27, 1972, 86 Stat. 1234, as amended, which is classified principally to chapter 65 (Sec. 4901 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 4901 of this title and Tables.

The Toxic Substances Control Act, referred to in subsec. (c)(1), is Pub. L. 94-469, Oct. 11, 1976, 90 Stat. 2003, as amended, which is classified generally to chapter 53 (Sec. 2601 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short Title note set out under section 2601 of Title 15 and Tables.

The Safe Drinking Water Act, referred to in subsec. (c)(1), is title XIV of act July 1, 1944, as added Dec. 16, 1974, Pub. L. 93-523, Sec. 2(a), 88 Stat. 1660, as amended, which is classified generally to subchapter XII (Sec. 300f et seq.) of chapter 6A of this title. For complete classification of this Act to the Code, see Short Title note set out under section 201 of this title and Tables.

Codification

Section was enacted as part of the Environmental Research, Development, and Demonstration Authorization Act of 1978, and not as part of the National Environmental Policy Act of 1969 which comprises this chapter.

Amendments

1995--Subsecs. (c) to (i). Pub. L. 104-66 redesignated subsecs. (e) to (i) as (c) to (g), respectively, and struck out former subsec. (c) which read as follows: ``In addition to providing scientific advice when requested by the Administrator under subsection (a) of this section, the Board shall review and comment on the Administration's five-year plan for environmental research, development, and demonstration provided for by section 4361 of this title and on each annual revision thereof. Such review and comment shall be transmitted to the Congress by the Administrator, together with his comments

thereon, at the time of the transmission to the Congress of the annual revision involved."

1994--Subsec. (a). Pub. L. 103-437, Sec. 15(o)(1), substituted ``Committee on Science, Space, and Technology, on Energy and Commerce, or on" for ``Committees on Science and Technology, Interstate and Foreign Commerce, or".

Subsec. (d). Pub. L. 103-437, Sec. 15(o)(2), struck out subsec. (d) which related to review and report to Administrator, President, and Congress on health effects research.

1980--Subsec. (a). Pub. L. 96-569 inserted provisions relating to requests by the enumerated Congressional committees.

Change of Name

Committee on Science, Space, and Technology of House of Representatives treated as referring to Committee on Science of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2, The Congress.

Committee on Energy and Commerce of House of Representatives treated as referring to Committee on Commerce of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2. Committee on Commerce of House of Representatives changed to Committee on Energy and Commerce of House of Representatives, and jurisdiction over matters relating to securities and exchanges and insurance generally transferred to Committee on Financial Services of House of Representatives by House Resolution No. 5, One Hundred Seventh Congress, Jan. 3, 2001.

Committee on Public Works and Transportation of House of Representatives treated as referring to Committee on Transportation and Infrastructure of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2.

Termination of Advisory Boards

Advisory boards established after Jan. 5, 1973, to terminate not later than the expiration of the 2-year period beginning on the date of their establishment, unless, in

the case of a board established by the President or an officer of the Federal Government, such board is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a board established by the Congress, its duration is otherwise provided for by law. See sections 3(2) and 14 of Pub. L. 92-463, Oct. 6, 1972, 86 Stat. 770, 776, set out in the Appendix to Title 5, Government Organization and Employees.

References in Other Laws to GS-16, 17, or 18 Pay Rates

References in laws to the rates of pay for GS-16, 17, or 18, or to maximum rates of pay under the General Schedule, to be considered references to rates payable under specified sections of Title 5, Government Organization and Employees, see section 529 [title I, Sec. 101(c)(1)] of Pub. L. 101-509, set out in a note under section 5376 of Title 5.

Section Referred to in Other Sections

This section is referred to in title 7 section 136w; title 21 section 346a.

12/27/12 Goo/Paulson/Vu memo requiring Agency to provide the SAB with information - Includes sample of information EPA will provide



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

JAN 2 2013

OFFICE OF THE ADMINISTRATOR

MEMORANDUM

SUBJECT: Identifying EPA Planned Actions for Science Advisory Board (SAB)
Consideration of the Underlying Science – Semi-annual Process

FROM: Michael Goo, Associate Administrator
Office of Policy *mlg*

Glenn Paulson
Science Advisor

Glenn Paulson

Vanessa Vu, Director
SAB Staff Office

Vanessa Vu

TO: General Counsel
Assistant Administrators
Associate Administrators
Regional Administrators

The purpose of this memorandum is to provide guidance for implementing improved coordination with the SAB, the goal of the memorandum dated January 19, 2012 on that topic (Attachment A).

We ask that you work with the Office of Policy to provide the SAB Staff Office with information about the science supporting major planned agency actions (Tier 1 and Tier 2 actions) that are in the pre-proposal stage. The *2012 Unified (Regulatory) Agenda and Regulatory Plan* was published on December 21, 2012 on the Office of Management and Budget web site <http://www.reginfo.gov/public/>.

Please provide the SAB Staff Office (contact: Angela Nugent) by **January 30, 2013**, a brief description of each action along with its supporting science, following the format provided in Attachment B. Please ensure that these submissions to the SAB are consistent with information developed in the action development process.

This process supplements the Deputy Administrator's annual memorandum requesting program and regional offices to identify scientific issues that might be appropriate for SAB consideration.

We look forward to working with you on this new process to strengthen science supporting EPA's decisions. Please contact us or Caryn Muellerleile (202-564-2855) in the Office of Policy or Angela Nugent (202-564-2218) in the SAB Staff Office, should there be questions.

Attachments

cc: Administrator
Deputy Administrator
Chief of Staff
Deputy Chief of Staff

Attachment A: January 19, 2012 Memorandum from Michal L. Goo



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

JAN 19 2012

OFFICE OF
POLICY

MEMORANDUM

SUBJECT: Coordination with the Science Advisory Board Regarding Proposed Criteria Documents, Standards, Limitations and Regulations

FROM: Michael L. Goo, Associate Administrator *MLG*
Office of Policy

TO: Assistant Administrators
General Counsel
Chief of Staff
Associate Administrators
Regional Administrators

This is to confirm the procedures that we have discussed regarding coordination with the Science Advisory Board (SAB) on the science and technical information underlying the EPA's proposed criteria documents, standards, limitations and regulations.

In addition to the current process by which program offices identify actions on which they plan to seek advice from the SAB on scientific and technical issues, OP will semiannually inform the SAB, through the SAB Staff Office, of upcoming proposed actions. This process will focus on those proposed regulations, criteria documents, standards or limitations that undergo interagency review and will operate as follows:

1. OP will submit to the SAB staff office a list, based on the Agency's *Semiannual Regulatory Agenda (Regulatory Agenda)*, augmented as necessary, of upcoming proposed regulations, criteria documents, standards or limitations that are expected to undergo interagency review. OP will work with program and regional offices to ensure that any actions not listed in the *Regulatory Agenda* that nevertheless are expected to be submitted for interagency review are included in this submission. For any of these additional actions, offices should provide a description similar to that provided for actions included in the *Regulatory Agenda*.

2. Program and Regional offices will notify the SAB staff office when proposed Agency actions that undergo interagency review become formally available for public review and comment. EPA programs are also expected to provide additional information as requested by the SAB Staff Office to facilitate the SAB's consideration of this information.

If the SAB decides to review and, as appropriate, comment on the scientific and technical basis for a proposed action, OP will work with the SAB Staff Office and the relevant program or regional office to establish the appropriate time frame for SAB review and comment.

Thank you for your assistance in adhering to this process. If you have any questions or concerns, please contact me, or your staff can contact Nicole Owens owens.nicole@epa.gov, at 202 (564-1550).

cc: Bob Perciasepe
Bob Sussman
Deputy Assistant Administrators
Deputy Associate Administrators
Deputy Regional Administrators
Assistant Regional Administrators
Alex Cristofaro
Nicole Owens
Vanessa Wu
Thomas Brennan

**Attachment B - Sample Description of Major Planned EPA Action-
Information to be Provided to the SAB**

Name of action: Development of Best Management Practices for Recreational Boats Under Section 312(o) of the Clean Water Act

EPA Office originating action: OW

Brief description of action and statement of need for the action:

This action is for the development of regulations by EPA to implement the Clean Boating Act (Public Law 110-288), which was signed by the President on July 29, 2008. The Clean Boating Act amends section 402 of the Clean Water Act (CWA) to exclude recreational vessels from National Pollutant Discharge Elimination System permitting requirements. In addition, it adds a new CWA section 312(o) directing EPA to develop regulations that identify the discharges incidental to the normal operation of recreational vessels (other than a discharge of sewage) for which it is reasonable and practicable to develop management practices to mitigate adverse impacts on waters of the United States. The regulations also need to include those management practices, including performance standards for each such practice. Following promulgation of the EPA performance standards, new CWA section 312(o) directs the Coast Guard to promulgate regulations governing the design, construction, installation, and use of the management practices. Following promulgation of the Coast Guard regulations, the Clean Boating Act prohibits the operation of a recreational vessel or any discharge incidental to their normal operation in waters of the United States and waters of the contiguous zone (i.e., 12 miles into the ocean), unless the vessel owner or operator is using an applicable management practice meeting the EPA-developed performance standards.

Timetable:

Statutory: Phase 1 - 2009, Phase 2 - 2010, and Phase 3 – 2011
Regulatory Agenda: Phase 1 NPRM - 2013, Phase 1FR - 2014

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No

Scientific questions to be addressed and approach:

Recreational boating activities can contribute to the spread of aquatic nuisance species, primarily through the secondary transport of organisms introduced to U.S. waters via other vectors. For example, recreational boating has been linked to the spread of Zebra and Quagga mussels from their initial introduction into the Great Lakes to other U.S. waters. Consequently, the Agency is considering the development of regulations designed to reduce the spread of such organisms by reducing propagule pressure from the recreational vessel vectors. Propagule pressure is a measure

of the number of individual organisms released as well as the number of discrete release events. While there is a general consensus that an increase in propagule pressure increases the probability of establishing a self-sustaining population of an aquatic nuisance species, the probability is a complex function of a wide range of variables. These variables include species traits (e.g., viability, reproductive capability, and environmental compatibility) and environmental traits (e.g., retention of propagules, and interactions with resident species). When addressing secondary transport via recreational vessels, as this project is designed to specifically do, additional variables such as vessel characteristics, voyage type, and propagule exposure need to be considered. Due to the complexity of this issue, the Agency is seeking expert scientific opinions on management practices that can reduce propagule pressure that results from recreational boating activities.

Plans for scientific analyses and peer review:

The Agency is planning to convene a workshop on secondary transport of aquatic nuisance species via recreational vessels. Invited participants will have expertise in the field of invasion biology and each participant will be charged to provide their expert scientific opinion on management practices that the Agency should consider as part of this rule making.

Attachment B

Process for Chartered SAB Discussions of EPA Planned Actions and their Supporting Science

Purpose: to describe the process for chartered SAB discussions of EPA planned actions and their supporting science.

Background:

- The Environmental Research, Development, and Demonstration Authorization Act of 1978 (ERDDAA) requires the EPA to make available to the SAB proposed criteria documents, standards, limitations, or regulations provided to any other Federal agency for formal review and comment, together with relevant scientific and technical information on which the proposed action is based. The SAB may then make available to the Administrator, within the time specified by the Administrator, its advice and comments on the adequacy of the scientific and technical basis of the proposed action.
- EPA has decided to inform the SAB at the time of publication of the Unified (Regulatory) Agenda or the Semi-annual Regulatory Agenda.
- EPA has also decided to provide the SAB with additional information about EPA actions, i.e., short descriptions of major planned actions that are not yet proposed but appear in the semi-annual regulatory agenda (see attached format). This process supplements the Deputy Administrator's annual memorandum requesting program and regional offices to identify scientific issues that might be appropriate for SAB consideration.

Process for Discussions of EPA Planned Actions and their Supporting Science

- The process begins after the EPA informs the SAB is informed about publication of the Unified (Regulatory) Agenda or semi-annual regulatory agenda and provides the SAB with a list and brief descriptions of major planned actions.
- An SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science will be constituted by the SAB Staff Office.
 - The Work Group will include three ongoing members (Work Group Chair, Chair of the Clean Air Scientific Advisory Committee and no more than two additional members) plus additional members from the Chartered SAB chosen each time the unified agenda or semi-annual agenda is released. Those additional members would have expertise related to the science supporting the major actions in that agenda.
- The SAB Work Group will screen the agenda and additional information provided by the agency on major planned actions to identify actions with science of interest. The Work Group will use a format (see attachment) to evaluate major planned actions.

- For those actions of interest to the SAB Work Group, the SAB Staff Office will schedule and document SAB Work Group fact-finding conversations with relevant agency technical staff.
- SAB Work Group will develop preliminary recommendations identifying actions for consideration by the Chartered SAB.
- The Chartered SAB will hold an initial teleconference to consider the preliminary recommendations from the SAB Work Group and to identify any other information needed for decision making.
- The Chartered SAB will hold a teleconference or meeting to determine whether any actions merit SAB additional consideration in order to provide advice and comments on the adequacy of the scientific and technical basis of the proposed action.
- The SAB Chair will document the SAB's determination in a letter to the Administrator.

Format for Agency Description of Potential EPA Tier 1 or Tier 2 Actions

Name of action:

RIN Number:

EPA Office originating action:

Brief description of action and statement of need for the action:

Timetable:

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

Scientific questions to be addressed and approach:

Plans for scientific analyses and peer review:

SAB Work Group Template

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action:

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		
Is the action primarily administrative (i.e., involve reporting or record keeping)?		
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		
Is the action an extension of an existing initiative?		

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency			
Addresses areas of substantial uncertainties			
Involves major environmental risks			
Relates to emerging environmental issues			
Exhibits a long-term outlook			

Identify any additional information needed for development of a recommendation on this action.

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

Attachment C
Summary of Science Advisory Board Fact-Finding
Meeting on EPA Planned Actions in the
Spring 2013 Regulatory Agenda

September 26, 2013

Introduction

The Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science was formed to provide the Chartered SAB with recommendations on the actions in the Spring 2013 regulatory agenda provided by the Agency on July 3, 2013. The chartered SAB will consider these recommendations as it determines whether it will provide “advice and comments on the adequacy of the scientific and technical basis” of agency actions, consistent with the requirements of the Environmental Research Development and Demonstration Authorization Act (ERDDAA).

On August 15, 2013, the Work Group received short descriptions from the EPA Program Offices on the major planned actions that are not yet proposed listed in the July 3, 2013 semi-annual regulatory agenda. They held a work session via teleconference on September 4, 2013 to discuss preliminary considerations on the planned actions and to identify additional information to assist them in identifying priority actions for SAB advice and comment. The Work Group identified questions about some of the planned actions so that they could provide recommendations to the Chartered SAB on the planned actions. The questions were forwarded to the EPA program offices on September 6, 2013 for responses and preparation for the fact-finding teleconference.

Dr. James Mihelcic, Chair of the Work Group, led members and EPA staff through discussion of the planned actions and the Work Group’s questions according to the meeting agenda (Attachment 1). Participants in the September 26, 2013 discussion are listed in Attachment 2.

Summary of Teleconference

PCB Use Authorizations (2070-AJ38)

Question from the Work Group for the Office of Chemical Safety and Pollution Prevention (OCSPP)

Please confirm that this action is only for use of PCBs in electrical equipment and natural gas pipelines and not other sources of exposure (i.e., pigment, paint products). If so, what is the rationale or justification for excluding other sources of PCBs?

Response: OCSPP confirms that the proposed rule will address the following specific areas: (1) the use, distribution in commerce, marking and storage for reuse of liquid PCBs in electric equipment; (2) improvements to the existing use authorization for natural gas pipelines; and (3) definitional and other regulatory “fixes.” The proposed rule is limited in scope in terms of uses and there are no scientific issues requiring further analysis.

Discussion: Work Group members noted that recent research in PCB air monitoring indicates concentrations in new buildings and that recently the International Agency for Research on Cancer identified PCB congeners as a group 1 carcinogen. Work Group members asked about other sources of PCBs. OCSPP staff (Tala Henry, Director, National Program Chemicals Division, Office of Pollution Prevention and Toxics) confirmed that the scope of this action is limited to electrical equipment and pipelines. Dr. Henry noted that EPA already considers PCBs as carcinogenic and there is a review of PCBs underway by EPA's National Center Environmental Assessment in the Integrated Risk Information System.

National Emission Standards for Hazardous Air Pollutants (NESHAP): Brick and Structural Clay Products Manufacturing and Clay Ceramics Manufacturing. (2060-AP69)

Question from the Work Group for the Office of Air and Radiation (OAR)

What emissions data or other information are being considered to establish emission limits for dioxin for this planned action?

Response: OAR Staff (Keith Barnett, Group Leader, Sector Policies and Programs Division in the Office of Air Quality Planning and Standards) noted that a previous NESHAP for Brick, Structural Clay Products, and Clay Ceramics Manufacturing action was vacated in 2007 after promulgation. The new planned action addresses that decision. Mr. Barnett provided a summary of the data collected to support this planned action including the types of equipment, information on dioxin analytes, and in facility monitoring data for one year.

Revision of Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In-Situ Leaching (2060-AP43)

Question from the Work Group for the Office of Air and Radiation (OAR)

The SAB provided recommendations on EPA's Draft Technical Report entitled [*Considerations Related to Post-Closure Monitoring of Uranium In-Situ Leach/In-Situ Recovery \(ISL/ISR\) Sites*](#) in February 2012. Please provide an update on how EPA plans to respond to these recommendations and incorporate the relevant recommendations into the technical support for this action.

Agency Provided Materials: The EPA responded to the SAB review on Post-Closure Monitoring of Uranium In-Situ Leach/In-Situ Recovery Sites in a June 12, 2012 letter and provided a detailed listing of the recommendations and EPA actions. The agency's response is available at: [http://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/964968D9229863A0852579A7006EC71A/\\$File/EPA-SAB-12-005_Response_06-12-2012.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/964968D9229863A0852579A7006EC71A/$File/EPA-SAB-12-005_Response_06-12-2012.pdf)

Response: Work Group members noted the detailed table in the agency's June 12, 2012 letter responding to the SABs recommendations. Members asked if there were any changes since that letter was provided. OAR staff (Mary Clark, Science Advisor, and Alan Perrin, Deputy Director, Radiation and Protection Division from the Office of Radiation and Indoor Air) commented that the action was still under formal interagency review with OMB and that consideration of the SAB recommendations was not yet final. They also noted that agency evaluation of the SAB recommendations and new data or information to support the action

would be included in the technical documents that will be developed to support the proposed rule.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart W: Standards for Radon Emissions from Operating Uranium Mill Tailings: Review (2060-AP26)

Questions from the Work Group for OAR

Please provide additional information on the scope and background of the settlement agreement.

Please identify the method(s) for radon monitoring and frequency of monitoring at liquid surfaces and any other relevant locations EPA is considering for this planned action.

What types/designs of heap leach piles are being considered for this planned action? How does EPA intend to measure radon emissions from heap leach piles? Can EPA provide or cite technical documents that provide the scientific and technical basis for this action?

Response: OAR staff (Mary Clark, Science Advisor, and Alan Perrin, Deputy Director, Radiation and Protection Division from the Office of Radiation and Indoor Air) elaborated on the short descriptions provided to the Work Group relating to how this action responded to a settlement agreement. They noted that this planned action was in response to an administrative challenge and the agency, as part of that agreement, maintains a webpage detailing the actions development. The web site link is: <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

Work Group members asked if the EPA could share any information on the specific monitoring and heap leach field that the agency is considering. OAR staff noted that they do not believe there are currently heap leach piles that would be subject to this planned action. Rather the planned action would serve to include any heap leach fields that are found or developed after the planned action is promulgated.

Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units (2060-AQ91)

Additional information utilized by the Work Group

In addition to the short descriptions that the EPA provided Work Group members identified material on regulations.gov on the April 2012 proposal “Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units (2060-AQ91).” This proposal was withdrawn by the Agency in September 20, 2013. The proposal and public comments in the docket (EPA-HQ-OAR-2011-0660) are available at: <http://www.regulations.gov>.

OAR Staff also provided a copy of the June 25, 2013 Presidential Memorandum that directed the EPA on power sector carbon pollution standards for electric utility generating units. This direction for new (2060-AQ91) and existing (2060-AQ33) sources in this memorandum is

available at: <http://www.whitehouse.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards>

Prior to the September 26, 2013 fact-finding teleconference, OAR staff provided additional information on the planned action, which was signed on September 20, 2013. EPA provided a link to the proposed actions webpage with materials on the Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units. Materials available on the publically available site include several fact sheets, the proposed rule, and Regulatory Impact Assessment (RIA). They may be accessed at: <http://www2.epa.gov/carbon-pollution-standards/2013-proposed-carbon-pollution-standard-new-power-plants>.

The SAB Staff Office also provided the Work Group with information about the address delivered by Administrator Gina McCarthy to the National Press Club regarding the EPA's priorities in addressing climate change on September 20, 2013. The publically available video of the hour long session is available at: <http://www.c-spanvideo.org/program/Gina>. The Administrator spoke on the agency's efforts to carrying out President Obama's Climate Action Plan to reduce carbon pollution and address the impacts of a changing climate. She responded to questions submitted by members of the audience at the breakfast.

At the September 26, 2013 fact-finding discussion, Kevin Culligan, Associate Director, Sector Policies and Program Division (SPPD), Office of Air Quality Planning and Standards (OAQPS) provided the EPA Staff response to the SAB Work Group's question. To do so, he provided a power point presentation to describe this action (Attachment 3). After the presentation Mr. Culligan reviewed the written questions from the Work Group to ensure a response was provided for each question. He also addressed additional questions from members of the Work Group.

Questions from the Work Group for OAR

Question: What is the general approach planned for this action? Is it a shift in fuel stock from coal to natural gas or a different approach?

Response: EPA staff stated that the general approach for this action is not a fuel stock shift and described the general approach in the presentation. The Agency evaluated and used new projections of energy capacity developed by the Energy Information Administration (EIA) and others (including utilities' Integrated Resource Plans, IRPs). The Agency also examined the status of available technologies and the status of new projects that are currently under construction or in advanced stages of development. These evaluations indicated that technologies in the proposed rule are available, technically feasible and in line with power sector trends.

Question: Will this new planned action utilize natural gas combined cycle (NGCC) technology? If so please provide the scientific and technical assumption the Agency used to support this approach.

Response: EPA staff noted that this action utilizes NGCC technology after consideration of the industry trends, available technology, and best systems of emission reduction. The standard for new natural gas-fired generation is based on the performance of natural gas combined cycle units

and proposes limits depending on the size of the unit. EPA staff did note that the proposal considers alternative fuel stock sources. The proposed standard for new coal-fired utility boilers and IGCC units is not based on the performance of NGCC units, but rather on the performance of those units implementing partial carbon capture and storage (CCS) technology.

Question: The EPA proposed a similar action in April 2012 that is listed on regulations.gov. Can EPA provide the context and differences between the previously proposed withdrawn rule and this action?

Response: EPA staff noted that there are a number of differences between the April 2012 proposal and the September 20, 2013 proposal. The more recent proposal is a new proposal and not a continuation of the previous proposal. The presentation describes several of those differences. One difference is that the April 2012 proposal provided a fuel-neutral standard while the September 2013 proposal provides a fuel-based standard after consideration of available technologies. The new action proposes separate standards for new natural gas-fired stationary combustion turbines and fossil fuel-fired utility boilers and IGCC units. The new action does not propose a standard of performance for new units that provide less than one third of their total power production to the grid.

Question: Can the agency provide a more detailed description of the planned action that includes information on which new sources the action is applicable?

Response: EPA Staff explained in the presentation that the action will apply to new natural gas-fired stationary combustion turbines that sell more than one-third of their potential output to the grid, fossil fuel-fired utility boilers, and integrated gasification combined cycle units. The standards apply to all such units that commence construction after the date that the proposed standards are published in the Federal Register.

Question: Is the EPA considering carbon capture and sequestration (CCS) technologies for this action? If so can EPA provide a description of the role CCS will play in this action and what scientific documents EPA is using as the basis for considering this technology to be economically and technically viable?

Response: EPA Staff explained that new coal plants will need to consider CCS. Implementing partial CCS was identified as a viable technology for new efficient coal units and would meet the criteria of the best system of emission reduction. The EPA Staff cited National Energy Technology Laboratory (NETL) studies as well as existing projects that are in construction and in advanced stages of development as the bases for this assumption. The NETL studies are all peer reviewed.

Question: What is being assumed about potential for co-firing biomass at coal-based power plants in setting these limits? How will this planned action account for CO₂ emissions from biogenic sources?

Response: The EPA does not propose a policy on biomass in this proposal. EPA Staff noted that there is a discussion in the preamble to the proposed rule and although the Agency

considered this option, it is not included as an option in the proposal. Note that a new utility unit that uses > 90% biomass would not be subject to the proposed standards.

Question: Please provide the basis for the standard that is being set by this planned action that is related to selection of plant size and mass emissions of CO₂ per power generated?

Response: The EPA noted that this rule applies to new fossil fuel-fired EGUs that generate electricity for sale and are larger than 25 megawatts. The rule does not apply to low capacity EGUs that sell less than one-third of their potential output to the grid. EPA focused on larger EGUs in this rule and not on smaller units that provide power for peak consumption hours.

Question: Is a 30-year average of emissions being used for this planned action, if so what is the basis of this approach?

Response: After evaluating the public comments and available information on power sector trends EPA is proposing a different averaging approach than the 30-year approach. After reviewing the public comment and available power sector data EPA proposed an 84 month (7 year) rolling average to meet the proposed standard and replaces the 30-year approach in the April 2012 proposal.

Question: Based on the responses to the previous questions can the EPA provide a description of any peer reviews conducted for the underlying science and technical basis for this action?

Response: EPA cited NETL studies and noted that those studies are all peer reviewed.

Additional Questions from the Work Group

One member asked what drives the percentages to CCS partial capture in this proposal.

Response: EPA Staff noted that the range of captured carbon dioxide from a new unit ranges from roughly 30-50%. This range of capture encompasses the range of rates for technologies and fuels (i.e., supercritical or ultra supercritical technologies or lignite or bituminous coals).

Another member asked about the strength of the cost estimates developed by NETL.

Response: EPA Staff expressed confidence in the assumptions used to develop the analyses and noted that the assumptions are reasonable and peer reviewed

Another member asked if EPA could elaborate on the technical feasibility for CCS in implementing the planned action.

Response: EPA Staff reviewed the three examples of implementing partial CCS in the presentation (page 9) and the strong demonstration these facilities make for the technology.

One member asked if there are any additional studies being considered by EPA that provided information on carbon storage?

Response: EPA Staff noted that this proposal relies on existing sequestration studies and reporting requirements for carbon capture. Mr. Culligan noted that the Agency is working with DOE on this issue and the Office of Water is also involved with geologic sequestration issues under the Underground Injection Control Program.

Greenhouse Gas Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (2060-AR33)

Additional information utilized by the Work Group

In addition to the one-page description of this action, OAR provided the link to the web page for the June 25, 2013 Presidential Memorandum. The memorandum directs the Environmental Protection Agency on power sector carbon pollution standards for electric utility generating units. This direction for new (2060-AQ91) and existing (2060-AQ33) sources in this memorandum is available at: <http://www.whitehouse.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards>

The SAB Staff Office also provided the Work Group with information about the address delivered by Administrator Gina McCarthy to the National Press Club regarding the EPA's priorities in addressing climate change on September 20, 2013. The publically available video of the hour long session is available at: <http://www.c-spanvideo.org/program/Gina>. The Administrator spoke on the agency's efforts to carrying out President Obama's Climate Action Plan to reduce carbon pollution and address the impacts of a changing climate. She responded to questions submitted by members of the audience at the breakfast.

Response:

Kevin Culligan, Associate Director, Sector Policies and Program Division (SPPD), Office of Air Quality Planning and Standards (OAQPS) provided a power point presentation (Attachment 4) to describe this action. After the presentation Mr. Culligan reviewed the written questions from the Work Group to ensure a response was provided for each question. He also addressed additional questions from members of the Work Group.

Questions from the Work Group for OAR

Question: The EPA description of this action appears to be the same approach used for the planned action Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units (2060-AQ91). Based on the similarity in the two actions the workgroup asks similar questions as in the proposed action (2060-AQ91) focusing on existing sources.

What are the general approaches being considered for this planned action? Is it a shift in fuel stock from coal to natural gas or a different approach? Can the Agency provide a more detailed description of the planned action that includes information on which sources the action will be applicable to?

Response: The EPA is evaluating many approaches and options at this stage of the rulemaking process. The planned action for existing sources will need to consider different approaches than the new source proposal.

Question: Is the EPA considering carbon capture and sequestration (CCS) technologies for this planned action? If so can EPA provide a description of the role CCS will play in this action and what scientific documents EPA is using as the basis for considering this technology to be economically and technically viable?

Response: At this time CCS may not be a feasible technology across the spectrum of electricity generating units. While feasible in new plants EPA does not anticipate application of this technology across all plants.

Question: What is being assumed about potential for co-firing biomass at coal-based power plants in setting these limits? How will this proposed action account for CO₂ emissions from biogenic sources?

Response: EPA anticipates conducting stakeholder listening sessions to discuss the planned action and has not yet developed the options for this planned action.

Question: Please provide a description of any peer reviews conducted for the underlying science and technical basis for this planned action.

Response: The EPA will be using the best science available to consider options for the planned action. Sources like NETL technical reviews will be considered but it is too early to provide more specific source.

Question: Please provide the basis for the standard that EPA is considering for this planned action that is related to selection of plant size and mass emissions of CO₂ per power generated?

Response: The EPA is conducting stakeholder listening sessions to discuss the planned action and has not yet developed the options for this planned action.

Question: Is a 30–year average of emissions being considered for this planned action, if so what is the rationale being considered of this approach?

Response: The 30-year averaging compliance option was specific to the CCS alternatives for new plants in the April 2012 proposal. EPA has not yet developed the options for this planned action.

Question: Based on the responses to the previous questions can the EPA provide a description of any peer reviews conducted for the underlying science and technical basis for this action?

Response: The EPA will be using the best science available to consider options for the planned action. Sources like NETL technical reviews will be considered but it is too early to provide more specific source.

Additional Questions from the Work Group

One workgroup member noted the Agency's reliance on NETL products and asked how EPA is engaging the scientific community and vetting the scientific and technical basis for the planned action?

Response: EPA staff noted that they are also evaluating power sector modeling results and these models are peer reviewed. Staff also explained that assumptions used in the model formulation are also peer reviewed. In addition to the power sector modeling, EPA staff cited technology data from the EIA and DOE are being considered. In addition to the peer review that IPM has undergone, EPA staff participate in the Stanford Energy Modeling Forum where results from EPA's power sector models are compared to results from other models developed by industry and academia.

Another member asked if the EPA anticipated bringing the planned action to the SAB for review?

Response: EPA staff noted that the power sector modeling and power sector analyses EPA is considering for this planned action do not present new scientific or technology issues. Rather, EPA, through this planned action, is not advancing the technical and scientific underpinnings, but developing the best implementation approaches that are reasonable to ask states to implement.

Attachment 1
Work Session for the SAB Work Group
on EPA Planned Actions for SAB Consideration of the Underlying Science
September 26, 2013, 3:00 – 5:00 p.m. ET
Draft Agenda

Call in Number: 1 866 299 3188
Conference Code: 202 564 4885#

Purpose: To discuss the questions sent by the SAB Work Group to the EPA Program Offices and receive additional information from EPA on the planned actions .

Introduction / Agenda review	5 minutes	Dr. James Mihelcic
Discussion with OCSPP Staff on planned action: <ul style="list-style-type: none">• <u>PCB Use Authorizations (2070-AJ38)</u>	10 minutes	Dr. Tala Henry, Director, National Program Chemicals Division, Office of Pollution Prevention and Toxics
Discussion with OAR Staff On planned actions <ul style="list-style-type: none">• <u>National Emission Standards for Hazardous Air Pollutants (NESHAP): Brick and Structural Clay Products Manufacturing and Clay Ceramics Manufacturing. (2060-AP69)</u>• <u>Revision of Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In-Situ Leaching (2060-AP43)</u>• <u>National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart W: Standards for Radon Emissions from Operating Uranium Mill Tailings: Review (2060-AP26)</u>	15 minutes 15 minutes	Mr. Keith Barnett, Group Leader, Sector Policies Program Division, Office of Air Quality Planning and Standards Mary Clark, Science Advisor Office of Radiation and Indoor Air Alan Perrin Deputy Director Radiation and Protection Division,

ORIA

<ul style="list-style-type: none">• <u>Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units (2060-AQ91)</u>• <u>Greenhouse Gas Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (2060-AR33)</u>	30 minutes	Kevin Culligan Associate Director Sector Policies and Program Division, Office of Air Quality Planning and Standards
Next steps Adjourn	5 minutes	Dr. James Mihelcic Thomas Carpenter, DFO

Attachment 2
Participants in the Science Advisory Board Fact-Finding
Meeting on EPA Planned Actions in the
Spring 2013 Regulatory Agenda

September 26, 2013

Members of Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Dr. James R. Mihelcic, Chair
Dr. Taylor Eighmy
Dr. R. William Field
Dr. H. Christopher Frey
Dr. Madhu Khanna
Dr. Peter S. Thorne

SAB Staff Office

Dr. Angela Nugent, Designated Federal Officer
Mr. Thomas Carpenter, Designated Federal Officer
Mr. Christopher Zarba

EPA Staff

Office of Chemical Safety and Pollution Prevention

Dr. Tala Henry, Director, National Program Chemicals Division, Office of Pollution Prevention and Toxics

Office of Air and Radiation

Mr. Keith Barnett, Group Leader, Sector Policies Program Division, Office of Air Quality Planning and Standards

Dr. Mary Clark, Science Advisor, Office of Radiation and Indoor Air

Mr. Alan Perrin, Deputy Director, Radiation and Protection Division, ORIA

Mr. Kevin Culligan, Associate Director, Sector Policies and Program Division, Office of Air Quality Planning and Standards

Dr. Nick Hutson, Energy Strategies Group
U.S. Environmental Protection Agency

Ms. Rona Birnbaum, Chief, Climate Science and Impacts Branch
Climate Change Division, Office of Atmospheric Programs, OAR

Mr. Carl Mazza, Senior Advisor, OAR

Reducing Carbon Pollution from New EGUs

U.S. Environmental Protection Agency
Office of Air and Radiation



Clean Air Act Section 111

- Authorized in 1970
- Establishes a mechanism for controlling air pollution from stationary sources
 - Applies to sources for which the Administrator, in her judgment, finds “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare”
 - Can apply to new, existing, modified and reconstructed sources
- More than 70 stationary source categories and subcategories are currently regulated under section 111
 - A full list is available in 40 CFR Part 60



Clean Air Act Section 111

- Lays out different approaches for new and existing sources
 - **New sources under section 111(b)**
 - Federal standards for new, modified and reconstructed sources
 - **Existing sources under section 111(d)**
 - State programs for existing sources that are equivalent to federal guidelines

3



Clean Air Act Section 111(b)

Statutory Authority

- Clean Air Act (CAA) section 111(b) requires EPA to regulate new sources.
 - **Section 111(b) – Federal Program for New Sources**
 - The Administrator shall “establish Federal standards of performance” for “new sources within [the] source category.”
 - **“Standard of Performance”**
 - “A standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction, which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.”

4



BSER: Best System of Emission Reduction

Key Factors in BSER Determination For New Power Plants

- **Feasibility**
System of emission reductions must be technically feasible
- **Costs**
Costs of the system are reasonable
- **Size of reductions**
EPA may consider the amount of emission reductions the system would generate
- **Technology**
Designed to promote the implementation and further development of technology

5



Proposed Carbon Pollution Standards for New Sources

- EPA is proposing to set separate standards for new natural gas-fired turbines and coal-fired units.
- The standards apply to new
 - natural gas-fired stationary combustion turbines
 - fossil fuel-fired utility boilers and integrated gasification combined cycle (IGCC) units

6



Proposed Carbon Pollution Standards for New Sources

Natural gas-fired stationary combustion turbines

- Standard based on the performance of modern natural gas combined cycle (NGCC) units
- Proposing 2 limits depending on the size of the unit.
- Proposed limits are:
 - 1,000 pounds of CO₂ per megawatt-hour (lb CO₂/MWh gross) for larger units (>850 mmBtu/hr)
 - 1,100 lb CO₂/MWh gross for smaller units (≤850 mmBtu/hr)

7



Proposed Carbon Pollution Standards for New Sources

Fossil fuel-fired utility boilers and IGCC units

- Standard based on performance of a new efficient coal unit implementing partial carbon capture and storage (CCS)
- Limits would lead to capture of only a portion of the CO₂ from a new unit (roughly 30%-50%)
- Proposing two limits, depending on the compliance period that best suits the unit.
- Proposed limits are
 - 1,100 lb CO₂/MWh gross over a 12-operating month period, or
 - 1,000-1,050 lb CO₂/MWh over an 84-operating month period

8



BSER analysis: Utility boilers and IGCC units

New efficient coal unit implementing partial CCS meets the criteria of BSER

- **Feasibility:** A number of examples in operation, under construction and or under development most notably:
 - Kemper County Energy Facility (582 MW IGCC) – Mississippi
 - Plans to capture 65% CO₂
 - Under construction (over 75% complete)
 - Great Plains Synfuels Plant – North Dakota
 - Capturing 50% of CO₂ for more than 10 years
 - Gasification component of IGCC
 - Boundary Dam (rebuild;110 MW PC) – Canada
 - 90% capture
 - Expected to be in operation by Spring of 2014
- **Costs:** Comparable to cost of other generation technologies meeting similar function
- **Size of reductions:** Range of CO₂ capture needed to meet standard (25 – 40%)
- **Technology:** Promotes innovation and development of CCS

9



Flexibility for New Coal Plants

- Proposing option for coal-fired units to use an 84-operating month rolling average of CO₂ emissions to meet the proposed standard, rather than meeting the standard over 12-months.
 - Emission limit would be more stringent (request comment on a range between 1,000 - 1,050 lb CO₂/MWh)
- Maintains the flexibility for units using partial CCS to optimize the system over several months, while setting a more reasonable time period for reporting and assuring compliance with the standard.
- Replaces 30-year timeframe in April 2012 proposal
 - Commenters supported the flexibility provided by a multi-year averaging period but many felt that 30 years was not a practical timeframe.

10

10



Proposed Standards In Line with Power Sector Trends

- According to new capacity projections made by EIA – and confirmed by additional EPA analysis -- the rule is not projected to require changes in the design or construction of new units.
- Most new electricity generating capacity is forecast to be either natural gas-fired or renewable.
- These units would already meet the standards proposed in this rule or are not covered by this rule
- The North American Electric Reliability Corporation’s (NERC) Long Term Reliability Assessment, which is based on utility plans for new generating capacity over a 10-year period,¹ reinforces this likelihood by stating that “gas-fired generation [is] the primary choice for new capacity.”

1. NERC, Long-Term Reliability Assessments for 2009 (Table 5) and 2012 (Figure 51). Capacity includes both planned and conceptual resources as defined by NERC.

Existing Source Standards

U.S. Environmental Protection Agency
Kevin Culligan
Office of Air and Radiation



Reducing Carbon Pollution From Power Plants

President's Directive to EPA:

- Set flexible carbon pollution standards, regulations or guidelines, as appropriate, for power plants under section 111 of the Clean Air Act
- Focus on these elements when developing the standards
 - Stakeholder engagement on program design
 - States
 - Leaders in the power sector
 - Labor leaders
 - Non-governmental organizations
 - Tribal officials
 - Members of the public
 - Flexibilities in the program design
 - Market-based instruments, performance standards, others
 - Costs
 - Tailor regulations and guidelines to reduce costs
 - Continued importance of relying on a range of energy sources
 - Other regulations that affect the power sector



Clean Air Act Section 111

- Authorized in 1970
- Establishes a mechanism for controlling air pollution from stationary sources
 - Applies to sources for which the Administrator, in his or her judgment, finds “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare”
 - Can apply to new, existing, modified and reconstructed sources
- Technology-based regulations
- More than 70 stationary source categories and subcategories are currently regulated under section 111
 - A full list of sources regulated under section 111 can be found in 40 CFR Part 60


3



Clean Air Act Section 111 (cont.)

- Lays out different approaches for new and existing sources
 - **New sources under section 111(b)**
 - Federal standards for new, modified and reconstructed sources
 - **Existing sources under section 111(d)**
 - State programs for existing sources that are equivalent to federal guidelines

4



Clean Air Act Section 111 (cont.)


Section 111(d) for Existing Sources

- Requires a different approach for achieving emission reductions than the approach used for new sources
- Provides that EPA establish
 - A procedure for states to issue performance standards for existing sources in the source category and
 - Guidance about the appropriate level of the standard
- EPA has established section 111 (d) regulations for existing sources for 5 source categories

On the books section 111(d) regulations

- Sulfuric acid plants (acid mist)
- Phosphate fertilizer plants (fluorides)
- Primary aluminum plants (fluorides)
- Kraft pulp plants (total reduced sulfur)
- Municipal solid waste landfills (landfill gases)

5




Clean Air Act Section 111 (cont.)

Section 111(d) is broad by design

- Congress anticipated that there might be air pollution problems beyond those covered by national ambient air quality standards (such as ozone and fine particle pollution) or air toxics standards that EPA would need to address
- Also recognized that existing sources do not have as much flexibility as new ones to build emission controls into their design
- Therefore, the statutory language in section 111(d) is broad
- Section 111 (d) provides greater flexibility to EPA and states to design a program in consultation with diverse range of stakeholders

6



Clean Air Act Section 111 (cont.)

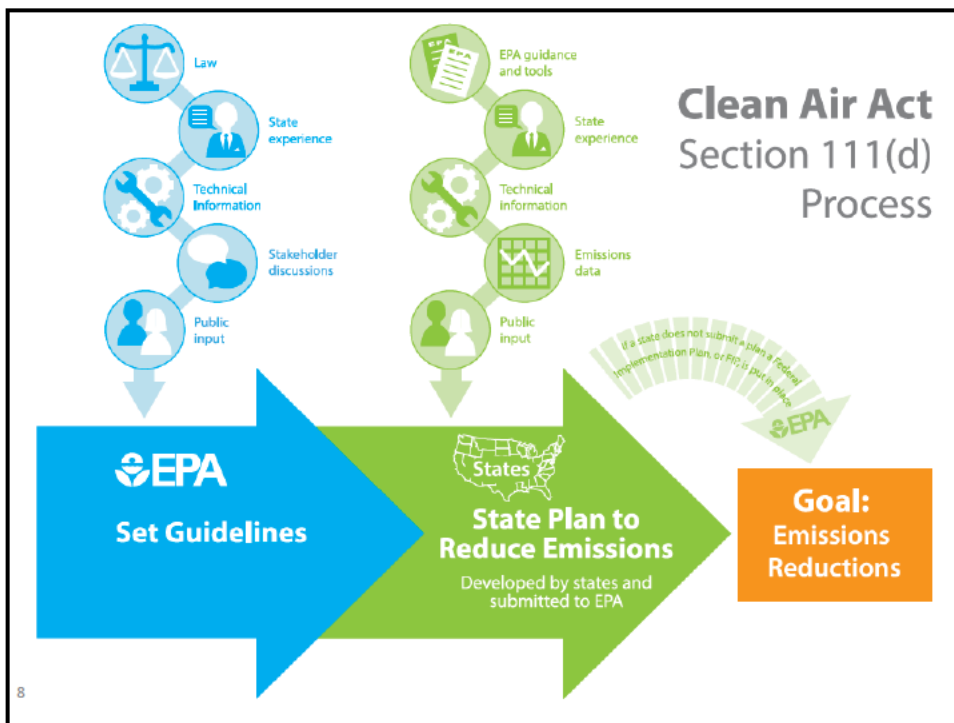
How Section 111(d) Has Worked

- EPA previously has set “emission guidelines” for 5 source categories
 - Has not prescribed technology that must be used to comply
- Once EPA set the guidelines, states developed section 111(d) plans establishing standards of performance for the covered sources in their state
- States then submitted section 111(d) plans to EPA for review and approval
- EPA subsequently evaluated the plans and took action through notice and comment rulemaking
- EPA has authority to prescribe a plan for a state in cases where the state fails to submit a satisfactory plan and to enforce the provisions of a plan in cases where the state fails to enforce them

Common elements of past guidelines

- Description of BSER that has been adequately demonstrated
- Degree of emission limitation achievable, costs and environmental impacts of application
- Time required to implement
- Other information to facilitate formation of state plans
- A goal for reductions – or “standard of performance” – based on a BSER analysis

7





Clean Air Act Section 111 (cont.)

How State Plans Have Worked

- States determine the combination of measures that will meet the guidelines
- State plans set standard of performance
 - Can be identical to EPA's guidelines (states adopt EPA's model rules)
 - Can differ from, but be equivalent to, EPA's guidelines
- State plans provide for implementation and enforcement
 - States have had flexibility when applying the standard of performance in their plans to take into consideration, among other factors, the remaining useful life of the source
- Timeframe to submit state plans has been set by EPA in the guidelines

9



Clean Air Act Section 111 (cont.)

Section 111(d) and Carbon Pollution

- In general, carbon pollution emissions differ from the pollutants that have been regulated in the past under section 111(d)
- Carbon pollution is:
 - Global
 - An order of magnitude greater than the other pollutants covered under section 111(d) in the past
 - Accumulating and remaining in the atmosphere over hundreds of years
- We have opportunities to explore various program designs and flexibilities because of
 - The broad statutory language of section 111(d)
 - The unique characteristics of carbon pollution
 - The interconnected nature of the power sector

10



The Electric Power Sector

- The electric power sector accounted for 33% of U.S. total GHG emissions and 60% of U.S. stationary source GHG emissions in 2011
- Fossil fuel-fired power plants are the largest source of U.S. CO₂ emissions
 - *Fossil fuel-fired power plants* use natural gas, petroleum, coal or any form of solid, liquid, or gaseous fuel derived from such material for the purpose of generating electricity

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Reducing Carbon Pollution from the Power Sector

- Many states already have climate and energy policies that reduce GHGs from the electric power sector
- Their programs show that opportunities for cost-effective reductions may range from direct measures at individual EGUs to indirect measures that reduce overall electricity demand or increase the use of low- or non-emitting generation
- To build a section 111(d) program that preserves and supports states' leadership, we would like to know more about state programs that exist today, how they work, lessons learned from state experience, and what states are planning for the near future

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Reducing Carbon Pollution from the Power Sector (cont.)

Design Approaches

- **Source-based approach**
 - Evaluates emission reduction measures that could be taken directly by affected sources (power plants)
- **System-based approach**
 - Evaluates broader portfolio of measures including those that could be taken beyond the affected sources but still reduce emissions at the sources

These approaches illustrate the range of designs that stakeholders have suggested under section 111(d)

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Reducing Carbon Pollution from the Power Sector (cont.)

Options to lower CO₂ emissions from existing power plants

- **Supply-side options**
 - Actions occur at the regulated source itself or other power plants
- **Demand-side options**
 - Actions occur at locations where electricity is used, as well as transmitted and distributed – not at the regulated source or other power plants

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Reducing Carbon Pollution from the Power Sector (cont.)

- **Supply-side options**
 - Directly reduce/avoid power plant CO₂ emissions through energy efficiency at the source
 - Indirectly reduce/avoid power plant CO₂ emissions by increasing the use of low- and non-emitting electric generation
- **Examples**
 - Heat rate improvements /energy efficiency at the EGU
 - Fuel switching to a lower-emitting fuel or co-firing with a lower-emitting fuel
 - Re-dispatch of EGUs based on CO₂ emission rate
 - Renewable energy portfolio requirements

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Reducing Carbon Pollution from the Power Sector (cont.)

- **Demand-side options**
 - Indirectly reduce/avoid power plant CO₂ emissions by lowering electricity demand
 - Reduces the overall amount of electricity generated at CO₂ emitting power plants
 - May also change the dispatch of electric generators in response to lower electricity demand
- **Examples**
 - End-use energy efficiency requirements and programs
 - Demand-side management programs

16

Carpenter, Thomas

From: Mazza, Carl
Sent: Thursday, October 31, 2013 4:17 PM
To: Carpenter, Thomas
Cc: Culligan, Kevin
Subject: FW: Will come by later

Tom you asked for additional information on the NETL data/information that played a role in the 111(d) proposed rules and the peer review to which they have been subjected. While we have had a busy schedule of outreach meetings this week we did reach out to NETL and have included the summary they provided in the response below.

EPA Technical staff will be available at the upcoming SAB meeting for any questions.

Carl

From: Culligan, Kevin
Sent: Thursday, October 31, 2013 2:16 PM
To: Mazza, Carl
Subject: Will come by later

[Proposed emission limits for utility boilers and IGCC units](#)

The EPA relied on information contained in reports from the US Department of Energy's National Energy Technology Laboratory (DOE/NETL). The DOE/NETL has released a series of reports on the 'Cost and Performance Baselines for Fossil Energy Plants'. The studies were conducted to establish estimates for the cost and performance of combustion and gasification based power plants as well as options for co-generating synthetic natural gas and fuels, all with and without carbon dioxide capture and storage.

The EPA relied on the cost and performance data in Volume 1 of the series – "Cost and Performance Baseline for Fossil Energy Power Plants, Volume 1: Bituminous Coal and Natural Gas to Electricity" (and subsequent updates) – available at http://www.netl.doe.gov/energy-analyses/baseline_studies.html

The power plant configurations analyzed in the study were modeled using the ASPEN Plus® (Aspen) modeling program. Performance and process limits were based upon published reports, information obtained from vendors and users of the technology, cost and performance data from design/build utility projects, and/or best engineering judgment. Capital and operating costs were estimated by WorleyParsons based on simulation results and through a combination of existing vendor quotes, scaled estimates from previous design/build projects, or a combination of the two. Operation and maintenance (O&M) costs and the cost for transporting, storing, and monitoring (TS&M) carbon dioxide (CO₂) in the cases with carbon capture were also estimated based on reference data and scaled estimates. The cost of electricity (COE) was determined for all plants assuming investor-owned utility (IOU) financing.

The initial results of this analysis were subjected to a significant peer review by industry experts, academia and government research and regulatory agencies. Based on the feedback from these experts, the report was updated both in terms of technical content and revised costs.

From: Mazza, Carl
Sent: Thursday, October 31, 2013 1:38 PM
To: Culligan, Kevin
Subject: come bye or call...thanks

Carl Mazza, Ph.D.
Science Advisor,
Office of Air and Radiation

Carpenter, Thomas

From: Kristin Gerdes [Kristin.Gerdes@NETL.DOE.GOV]
Sent: Thursday, October 31, 2013 4:55 PM
To: Carpenter, Thomas
Cc: Eric Grol; James Black; John Wimer; Sean Plasynski
Subject: Peer review of referenced NETL studies in EPA NSPS

Mr. Carpenter,

In response to your voicemail request, below is information regarding publically available information on peer reviews of the DOE/NETL studies referenced in the proposed EPA NSPS rule.

"Cost and Performance Baseline for Fossil Energy Plants, Volume 1: Bituminous Coal and Natural Gas to Electricity" was originally released in May 2007. As part of development of that report, a peer review was conducted as described in the text of the preamble (NETL Viewpoint) to the report, shown below.

"The initial results of this analysis were subjected to a significant peer review by industry experts, academia and government research and regulatory agencies. Based on the feedback from these experts, the report was updated both in terms of technical content and revised costs."

Reviewers were sent the report and given several weeks for review and the regulatory agency that provided the review was the EPA. Beyond this we do not have a documented or publically-available description for this peer review process as it was specifically tailored for this report.

Revision 1 to this report was minor and issued several months after the original. Neither the November 2010 update to this report (Revision 2) nor the separate report updating costs to 2011 dollars (August 2012) went through a peer review.

For reference, these reports can be found here: http://www.netl.doe.gov/energy-analyses/baseline_studies.html

The August 2011 report "Cost and Performance of PC and IGCC Plants for a Range of Carbon Dioxide Capture" which modified the CO2 capture rates for select cases presented in the "Cost and Performance Baseline for Fossil Energy Plants" did not undergo peer review. That report can be found here: <http://www.netl.doe.gov/energy-analyses/refshelf/PubDetails.aspx?Action=View&PubId=396>

Please let me know if you have additional questions.

Regards,
Kristin

Kristin J. Gerdes
Director of Performance Division
Office of Program Performance and Benefits
National Energy Technology Laboratory

Attachment D
Descriptions of Major EPA Planned Actions
Identified in the July 2013 Semi-Annual Regulatory
Agenda with SAB Work Group Recommendations

RIN	Title	Spring 2013 Stage	Page
2060-AR76	Renewable Fuel 2014 Volume Standards	Proposed Rule	1
2060-AQ44	Review of the National Ambient Air Quality Standards for Lead	Proposed Rule	3
2060-AP69	NESHAP: Brick and Structural Clay Products and Clay Products	Proposed Rule	5
2060-AR28	PSD for Particulate Matter Less Than 2.5 Micrometers (PM _{2.5})—Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration: Reconsideration	Proposed Rule	7
2060-AP26	National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart W: Standards for Radon Emissions From Operating Uranium Mill Tailings: Review	Proposed Rule	10
2060-AP43	Revision of 40 CFR Part 192--Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching Processing Facilities	Proposed Rule	13
2060-AQ48	Implementation Rule for 2012 PM _{2.5} NAAQS	Proposed Rule	16
2060-AR33	Greenhouse Gas New Source Performance Standard for Electric Generating Units-Emission Guidelines for Existing Sources	Proposed Rule	18
2060-AQ91	Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units	Proposed Rule	21
2070-AJ22	Pesticides; Agricultural Worker Protection Standard Revisions	Proposed Rule	25
2070-AJ38	Polychlorinated Biphenyls (PCBs); Reassessment of Use Authorizations	Proposed Rule	28

OFFICE OF AIR AND RADIATION

Name of action: 2014 Standards for the Renewable Fuel Standard Program, Notice of Proposed Rulemaking

RIN Number: 2060 - AR76

EPA Office originating action: OAR/Office of Transportation and Air Quality

Brief description of action and statement of need for the action:

Under Clean Air Act Section 211(o), EPA is required to set annual percentage standards under the Renewable Fuels Standard (RFS) program based on gasoline and diesel projections from the Energy Information Administration (EIA). This regulatory action will propose the 2014 annual percentage standards for the RFS program for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel. These standards will apply to all gasoline and diesel produced or imported in 2014.

Timetable: The Agency intends to propose the 2014 RFS volumes in late September following interagency review.

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No work products meeting this description will be developed for this rulemaking. Consistent with past rulemakings which set the annual RFS standards, the analyses conducted for the determination of the required volume of cellulosic biofuel will be based on consultation with EIA, information from stakeholders, confidential and non-confidential information from individual producers of renewable fuels, and our own assessment of industry capabilities for facility startup and production ramp-up periods. The determination of the required volumes for advanced biofuel and total renewable fuel will be based on an assessment of the ability of the renewable fuels industry to produce sufficient renewable fuels and make them available to the vehicles that can use them.

Scientific questions to be addressed and approach:

See description of analysis above

Plans for scientific analyses and peer review:

See description of analysis and involvement of non-EPA entities above

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Renewable Fuel 2014 Obligations (2060-AR76)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency			X
Addresses areas of substantial uncertainties			X
Involves major environmental risks			X
Relates to emerging environmental issues			X
Exhibits a long-term outlook			X

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration. This action involves consulting industry, EIA and other stakeholders to determine the feasible volume of advanced renewable fuels that can be met by industry given the current state of technology. This is an ongoing activity undertaken each year by the EPA. There is no new scientific approach underlying this action that needs to be reviewed by the SAB.

Name of action: Review of the National Ambient Air Quality Standards for Lead (SAN 5475)

RIN Number: 2060-AQ44

EPA Office originating action: Office of Air and Radiation

Brief description of action and statement of need for the action: Under the Clean Air Act, EPA is required to review and, if appropriate, revise the air quality criteria and the primary (health-based) and secondary (welfare-based) national ambient air quality standards (NAAQS) every five years. Each review generally includes the preparation of an Integrated Science Assessment (ISA), Risk/Exposure Assessment (REA), as warranted, and a Policy Assessment Document (PAD). Each draft of these assessment documents, which inform the Administrator's proposed and final decisions as to whether to retain or revise the standards, is reviewed by EPA's Clean Air Scientific Advisory Committee (CASAC). Established in 1977 under the Clean Air Act (CAA) Amendments of 1977 (see 42 U.S.C. § 7409(d)(2)), CASAC provides independent advice to the EPA Administrator on the scientific and technical bases for the NAAQS and recommends to the Administrator any new standards or revisions of existing criteria and standards as appropriate under CAA sections 108 and 109. The Chair of the CASAC also serves as a member of the chartered Science Advisory Board. The SAB is responsible for selection of CASAC members and overall management of CASAC.

Timetable:

Integrated Science Assessment (final): 2013

Policy Assessment (draft): January 2013

Policy Assessment (final): Fall 2013

Regulatory Agenda - NPR: 2014

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

Yes. All major assessment documents compiled by EPA that form the basis for the review of the lead standards are reviewed by CASAC in accordance with the requirements of CAA section 109(d)(2).

Plans for scientific analyses and peer review:

SAB peer review conducted: all major assessment documents compiled by EPA have been reviewed by CASAC.

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Review of the National Ambient Air Quality Standards for Lead (2060-AQ44)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?	X	
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"	X	
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency		X	
Addresses areas of substantial uncertainties	X		
Involves major environmental risks		X	
Relates to emerging environmental issues		X	
Exhibits a long-term outlook		X	

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration. It has already been reviewed in detail by CASAC as part of a multi-year review cycle, and a final report from CASAC has already been communicated to the EPA Administrator. The chartered CASAC has a specific role for reviewing NAAQS under the Clean Air Act. It would be duplicative and unnecessary for SAB to also conduct a review. Therefore, it is recommended that SAB not conduct a review of this action.

Name of action: National Emission Standards for Hazardous Air Pollutants (NESHAP): Brick and Structural Clay Products Manufacturing and Clay Ceramics Manufacturing

RIN Number: 2060-AP69

EPA Office originating action: OAR

Brief description of action and statement of need for the action:

The EPA has determined that the clay products manufacturing industry may reasonably be anticipated to emit several of the hazardous air pollutants (HAPs) listed in Section 112(b) of the Clean Air Act (CAA), as amended in 1990. As a consequence, clay products manufacturing was included in the initial list of HAP-emitting categories published July 16, 1992, in the Federal Register and included in the draft schedule for the promulgation of emission standards published in the Federal Register on September 24, 1992. As a result of judicial review, the standards were subsequently vacated and are being redeveloped in this action.

This rulemaking will establish emission limits for hazardous air pollutants (HF, HCl, dioxin and metals) emitted from brick and clay ceramics kilns, as well as dryers and glazing operations at clay ceramics production.

Timetable:

EPA is under court-ordered deadlines to issue a notice of proposed rulemaking by February 16, 2014, and a final rule by December 18, 2014.

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No, this action does not rely on new science. These standards will be based on currently available emission data. As required under Section 112(b) these Standards are technology based. Standards for existing sources will be based on the average emission limitation achieved by the best performing 12 percent of existing sources in the category, while standards for new sources will be based on the best performing existing source in the same category.

Scientific questions to be addressed and approach:

The proposed rule will be based on EPA evaluation of currently available emissions data, current practice and applicable/available technologies in use within the industry.

Plans for scientific analyses and peer review:

Not applicable

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: NESHAP: Brick and Structural Clay Products and Clay Products (2060-AP69)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative? *		X

* The 1992 inclusion of HAPs for clay products manufacturing was vacated by judicial review. Therefore this would not be considered an extension of an existing initiative.

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency			X
Addresses areas of substantial uncertainties			X
Involves major environmental risks			X
Relates to emerging environmental issues			X
Exhibits a long-term outlook			X

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration. The EPA is required to set emission standards for hazardous air pollutants from brick and clay ceramic kilns and ceramic production operations. These will be determined by industry ability to achieve these standards and will be based on practices of the best performing facilities. No new scientific activity is expected to underlie this action.

Name of action: Prevention of Significant Deterioration for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}) – Increments, Significant Impact Levels and Significant Emission Rates: Reconsideration (SAN 5594)

RIN Number: 2060-AR28

EPA Office originating action: Office of Air and Radiation

Brief description of action and statement of need for the action: This rulemaking addresses legal challenges brought against the EPA's 2010 PSD rule for PM_{2.5}, including (1) a January 22, 2013, remand by the U.S. Court of Appeals for the D.C. Circuit (Court) concerning the PM_{2.5} significant impact levels (SILs) and significant monitoring concentration (SMC), and (2) a pending court challenge and related administrative petition for reconsideration from the Texas Commission on Environmental Quality (TCEQ) on related issues. Both the remand and the petition address provisions contained in the 2010 Final PSD Rule for PM_{2.5} Increments, SILs and SMC (75 FR 64864, October 20, 2010). This rulemaking will respond to the Court's remand by revising the PM_{2.5} SILs provision contained in paragraph (k)(2) at 40 CFR 51.166 and 52.21 of the PSD regulations that included the numerical values of PM_{2.5} SILs and statements about their role in completing an air quality impact analysis with regard to the PM_{2.5} NAAQS. This rulemaking will also reconsider the significant emission rates (SER) for PM_{2.5} and precursor emissions. We intend to develop SERs for direct PM_{2.5} emissions and for PM_{2.5} precursors that are aligned with the reconsidered SILs in the sense that, generally speaking, only emission increases greater than the SERs would be expected to result in ambient impacts greater than the SILs. This rulemaking is also intended to address the administrative petition from TCEQ for reconsideration of the 2010 final rule.

Timetable:

- Preliminary Analytical Blueprint under development – August 2013
- Proposal target date – May 2014

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No. The key issue in this rulemaking is legal and policy in nature, in particular whether the Clean Air Act allows EPA to set SILs for ambient impacts from new and modified sources based on a *de minimis* rationale and whether the levels to be proposed by EPA are in fact *de minimis* in the sense of allowing only trivial deviations from Clean Air Act requirements for permits.

Scientific questions to be addressed and approach:

The only scientific question in this rulemaking concerns the establishment of SERs for PM_{2.5} precursors that correspond to particular ambient impact levels for PM_{2.5}, such that sources with emissions below a SER are highly unlikely to have PM_{2.5} ambient impacts above that particular level and therefore whether, as a matter of policy, is it a poor use of resources to require permit

applicants to conduct modeling or other quantitative analysis as part of the permit application process.

Plans for scientific analyses and peer review:

We intend to explore the above science question using air quality models that have already completed peer review, particularly CMAQ and/or CAMx.

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}) – Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration: Reconsideration (2060-AR28)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency			X
Addresses areas of substantial uncertainties			X
Involves major environmental risks		X	
Relates to emerging environmental issues			X
Exhibits a long-term outlook		X	

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration. The proposed rulemaking addresses legal challenges to portions of an existing initiative and proposes revisions of PM_{2.5} Significant Impact Levels; however, it does not appear to rely on new science. The key issue at hand is whether the EPA under the CAA can set Significant Impact Levels based on a de minimis rationale and whether the levels proposed are de minimis

Name of action: Proposed Rulemaking for 40 CFR Part 61, Subpart W: Revision of National Emission Standard for Radon Emissions from Operating Mill Tailings

RIN Number: 2060-AP26

EPA Office originating action: OAR

Brief description of action and statement of need for the action:

Clean Air Act amendment to an existing rule proposes to control radon emissions by establishing Generally Available Control Technology (GACT) standards for operating impoundments, evaporation ponds, and heap leach piles containing uranium byproduct material. The proposal maintains work practice standards for operating conventional impoundments constructed after December 1989, and replaces radon monitoring requirements with work practice standards for operating impoundments constructed earlier. New work practice standards are proposed for evaporation ponds (maintaining a specified level of liquid) and heap leach piles (maintaining a specified saturation level). Rulemaking is in response to a settlement agreement with stakeholders.

Timetable:

June 2013	Transmittal to OMB
November 2014	Publication for comment

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No. This is a limited action proposing technology/work practice standards to limit radon emissions.

Scientific questions to be addressed and approach:

Issues for public comment include availability of methods for monitoring radon at liquid surfaces (EPA did not identify such methods) and technical questions regarding maintaining and measuring saturation level of heap leach piles.

Plans for scientific analyses and peer review:

The technical basis for subpart W was peer reviewed by the SAB in 1989, and as indicated above, this technical basis will not change for the proposed revision.

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart W: Standards for Radon Emissions from Operating Uranium Mill Tailings: Review (RIN: 2060-AP26)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency		X	
Addresses areas of substantial uncertainties		X	
Involves major environmental risks		X	
Relates to emerging environmental issues		X	
Exhibits a long-term outlook	X		

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration. The SAB’s Radiation Advisory Committee completed a review of the technical basis for Subpart W of the NESHAPs in 1988 – [http://yosemite.epa.gov/sab/sabproduct.nsf/CC0AEE6D42E6E6ED8525732500695FF8/\\$File/NESHAP-RADIONUCLIDES++RAC-89-003_89003_5-22-1995_217.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/CC0AEE6D42E6E6ED8525732500695FF8/$File/NESHAP-RADIONUCLIDES++RAC-89-003_89003_5-22-1995_217.pdf). The EPA is using the same technical basis for this planned revision.

“The National Emission Standards for Hazardous Air Pollutants (NESHAP) subpart W protects human health and the environment by setting radon emission standards and work practices for

operating uranium mill tailings impoundments. EPA is in the process of reviewing this standard. If necessary, the agency will revise the NESHAP requirements for radon emissions from operating uranium mill tailings.” Subpart W includes: 1) designation of facilities, definitions, standards, determining compliance, annual reporting requirements, recordkeeping requirements, and exemptions from the reporting and testing requirements of 40 CFR 61.10.

In the standard, radon-222 emission rates are limited to 20 picocuries per square meter per second and the standard requires that new tailings impoundments meet specified work practice standards. EPA plans to propose a rule on Subpart W in late October 2013 with a final decision in 2014. The Subpart W rulemaking package was accepted by OMB on June 6, 2013. Additional information concerning the proposed action is located at Website is located at:

www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html. Minutes from an April 13, 2013 EPA stakeholder conference call included the statement from Reid Rosnick (ORIA) that the rule will address conventional mills, in situ recovery, as well as heap leach and that until the rule is proposed it is considered to be internal and deliberative - <http://www.epa.gov/radiation/docs/neshaps/subpart-w/subpartwquarterlyconferencecall-0410313.pdf>.

Summary discussion with Agency

The SAB Work Group had a conference call on September 26, 2013 with Mary Clark (Science Advisor Office of Radiation and Indoor Air) and Alan Perrin (Deputy Director,

Radiation and Protection Division, ORIA) to collect additional information about the planned action. A website describing the agreement and other supporting information was provided – <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>. Mary Clark also indicated that there are no existing heap leach piles to which a proposed rule would apply. No additional details regarding the rule were provided.

Name of action: **Proposed Rulemaking for 40 CFR Part 192: Amendments to Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings**

RIN Number: 2060-AP43

EPA Office originating action: OAR

Brief description of action and statement of need for the action:

Atomic Energy Act* rulemaking proposes ground water protection requirements specific to *in-situ* uranium recovery (ISR) facilities. ISR, which uses chemical solutions to alter ground water chemistry and liberate uranium, is now the dominant form of uranium production in the U.S., and presents a direct threat to ground water quality. These standards, issued in 1983, were developed primarily to address conventional mills and mill tailings sites, and are not well-suited to some aspects unique to ISR sites. The proposed standards will address ground water monitoring during the pre-operational, operational, restoration, and post-restoration phases.

*As amended by the Uranium Mill Tailings Radiation Control Act of 1978

Timetable:

September 2013	Final Agency Review
October 2013	Transmittal to OMB
First Quarter 2014	Publication for comment

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No.

Scientific questions to be addressed and approach:

Issues addressed by an SAB advisory (see below) included establishing baseline ground water characteristics, elements of an appropriate monitoring system, appropriate statistical techniques, approaches for post-restoration ground water monitoring, and determination of long-term stability. EPA's proposal incorporates SAB/RAC advice on these issues.

Plans for scientific analyses and peer review:

The Agency is proposing ground water monitoring requirements for activities that involve geochemical processes. The SAB conducted an advisory of the key technical issues associated with this action in July 2011, and finalized a report of recommendations in February 2012. The Agency has responded to the SAB findings and recommendations, and has incorporated them into technical documentation and rulemaking approach.

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Revision of Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching (2060-AP43)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?	X	
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency	X		
Addresses areas of substantial uncertainties	X		
Involves major environmental risks		X	
Relates to emerging environmental issues	X		
Exhibits a long-term outlook	X		

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

The SAB workgroup recommends that SAB review the scientific and technical basis for the Revision of 40 CFR Part 192--Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching Processing Facilities (2060-AP43) when details of the proposed rule are available. Although the SAB provided advice to the Agency in 2012 (*Advisory on EPA's draft Technical Report entitled Considerations Related to Post Closure Monitoring of Uranium In-Situ Leach/In-Situ Recovery (ISL/ISR) Sites* EPA-SAB-12-2005), this action is still under development and the work group could not determine ,from the limited information provided by the agency, the adequacy of the scientific and technical basis for this

important planned action. The Work Group recommends that the SAB evaluate the proposed rule and at that time determine if commentary is appropriate to provide to the Administrator.

The lack of detail concerning the proposed rule limits assessment of the adequacy of the supporting science.

The EPA plans to review and revise the health and environmental protection standards for uranium and thorium mill tailings and uranium in situ leaching with a particular focus on significant changes in uranium industry extraction technologies and their potential impacts to groundwater. The EPA submitted a draft technical report entitled “Considerations Related to Post-Closure Monitoring of Uranium In-Situ Leach/In-Situ Recovery (ISL/ISR) Sites” to the EPA SAB RAC in June 2011 and requested SAB recommendations regarding the technical aspects of designing and implementing the groundwater monitoring networks at ISL uranium mines. The SAB recommended on February 17, 2012

([http://yosemite.epa.gov/sab/sabproduct.nsf/964968D9229863A0852579A7006EC71A/\\$File/EP A-SAB-12-005-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/964968D9229863A0852579A7006EC71A/$File/EP A-SAB-12-005-unsigned.pdf)) that the EPA expand greatly the draft technical report “so that it is protective and realistic in guiding the monitoring program and evaluating its results” and provided specific recommendations. In June 2012, the EPA provided summary responses ([http://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/964968D9229863A0852579A7006EC71A/\\$File/EPA-SAB-12-005_Response_06-12-2012.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/964968D9229863A0852579A7006EC71A/$File/EPA-SAB-12-005_Response_06-12-2012.pdf)) to the SAB’s recommendations.

Summary discussion with Agency

The SAB Work Group had a conference call on September 26, 2013 with Mary Clark (Science Advisor Office of Radiation and Indoor Air) and Alan Perrin (Deputy Director, Radiation and Protection Division, ORIA) to collect additional information about the planned action. Mary Clark indicated that the EPA has further considered the RAC’s recommendations and have incorporated the relevant recommendations into the technical support for the proposed rule. Additional details regarding the technical support information were not provided.

Name of action: Implementation Rule for 2012 PM2.5 NAAQS (SAN 5477)

RIN Number: 2060-AQ48

EPA Office originating action: Office of Air and Radiation

Brief description of action and statement of need for the action: This proposed rule will address a range of implementation requirements for the 2012 National Ambient Air Quality Standards (NAAQS) for PM2.5. The requirements expected to be addressed in this rule include the timing of State Implementation Plan submissions, the attainment deadlines for areas designated nonattainment, PM2.5 precursor policies, and requirements pertaining to attainment demonstrations, emission inventories, reasonably available control technology, reasonably available control measures, best available control measures, reasonable further progress, mid-course reviews, and contingency measures.

Timetable:

- Detailed Analytical Blueprint and Options Selection Meeting – August 2013
- Proposal date – February 2014

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No

Scientific questions to be addressed and approach:

None. This rule will provide states with EPA's policy on how to comply with Clean Air Act statutory requirements for those areas designated as nonattainment for the 2012 NAAQS.

Plans for scientific analyses and peer review:

None

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Implementation Rule for 2012 PM2.5 NAAQS (2060-AQ48)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?	X	
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency			X
Addresses areas of substantial uncertainties			X
Involves major environmental risks			X
Relates to emerging environmental issues			X
Exhibits a long-term outlook		X	

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration.

The implementation rule is largely an administrative rule pertaining to factors such as timing of State Implementation Plan submissions, the attainment deadlines for areas designated nonattainment, PM2.5 precursor policies, and requirements pertaining to attainment demonstrations, emission inventories, reasonably available control technology, reasonably available control measures, best available control measures, reasonable further progress, mid-course reviews, and contingency measures. As such, this proposed action is not a priority for review by SAB.

Name of action: Greenhouse Gas Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

RIN Number: 2060-AR33

EPA Office originating action: OAR

Brief description of action and statement of need for the action:

Power plants are the largest concentrated source of emissions in the United States, together accounting for roughly one-third of all domestic greenhouse gas emissions. President Obama's Climate Action Plan, and the June 25, 2013 presidential memorandum on power sector carbon pollution standards, direct EPA to take several actions to reduce greenhouse gas emissions from power plants. These actions include proposing, and then finalizing, greenhouse gas emission guidelines for existing power plants. EPA plans to establish greenhouse emission guidelines for existing electric utility generating units (EGUs) under the authority of section 111 of the Clean Air Act.

Timetable:

EPA plans to issue proposed greenhouse gas emission guidelines for existing EGUs by June 1, 2014, and then issue final emission guidelines by June 1, 2015.

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

This action does not rely on new science. The action will rely on the identification of existing, proven technologies to set achievable emission standards that, by statute, offer the "best system of emission reduction" (BSER).

Scientific questions to be addressed and approach:

This is a technology based rule (as described above).

Plans for scientific analyses and peer review:

See description above.

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Greenhouse Gas New Source Performance Standard for Electric Generating Units-Emissions Guidelines for Existing Sources (2060-AR33)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency	X		
Addresses areas of substantial uncertainties	X		
Involves major environmental risks	X		
Relates to emerging environmental issues	X		
Exhibits a long-term outlook		X	

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This planned action should not be considered for review by the SAB.

The planned action involves amending performance standards by adding greenhouse gas emissions to existing Electric Generating Units (EGUs) and is tied to Executive Order 13211. In the fact finding teleconference on September 26, 2013, the EPA staff noted that this planned action, will not advance the technical and scientific requirements. EPA anticipates that the planned action will develop the best approaches that are reasonable to ask states to implement. EPA stated that demand management may be a focus of utilities in meeting this planned action's

standards. If this is the case, the Work Group agrees that there may not be major scientific approaches being applied to the problem that are new to the agency.

The EPA is conducting stakeholder listening sessions to discuss the planned action and has not yet developed the options for this planned action. The EPA is evaluating many approaches and options at this stage of the rulemaking process. The planned action for existing sources will need to consider different approaches than the new source proposal. At this time carbon capture and storage (CCS) may not be a feasible technology across the spectrum of electricity generating units. While feasible in new plants EPA does not anticipate application of this technology across all plants.

EPA staff also noted that they are also evaluating power sector modeling results and these models are peer reviewed. Staff also explained that assumptions used in the model formulation have been peer reviewed. In addition to the power sector modeling, EPA staff cited technology data from the Energy Information Agency and Department of Energy are being considered. In addition to the peer review that Integrated Planning Model has undergone, EPA staff participate in the Stanford Energy Modeling Forum where results from EPA's power sector models are compared to results from other models developed by industry and academia.

Specific technical and scientific matters identified by the Work Group that the SAB may also want to consider are:

- Scientific and technical lessons learned from the establishment of Clean Air Act Section 111(d) emissions standards for other regulated emissions (e.g., acid mist, fluorides, total reduced sulfur, landfill gases) while recognizing that carbon pollution emissions differ from these other pollutants in scope (global), magnitude (> 10x), and atmospheric biogeochemical cycling.
- The scientific and technical assumptions used by States to set standards under Section 111(d) of the Clean Air Act; specifically around descriptions of “Best Systems of Emission reductions (BSERS)”, degree of emission limitations achievable, time to implementation, and emission reduction goals (or “standards of performance” under the BSER).
- The commonality of State carbon pollution emissions technological controls and underlying scientific assumptions around emissions (under their existing climate and energy policies).
- Methods to understand scientific and technical commonality around source-based and system-based emissions across the States.
- Scientific and technical basis for State-based supply-side and demand-side control options.

Name of action: Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units

RIN Number: 2060-AQ91

EPA Office originating action: OAR

Brief description of action and statement of need for the action:

Power plants are the largest concentrated source of emissions in the United States, together accounting for roughly one-third of all domestic greenhouse gas emissions. President Obama's Climate Action Plan, and the June 25, 2013 presidential memorandum on power sector carbon pollution standards, direct EPA to take several actions to reduce greenhouse gas emissions from power plants. One of these is to propose, and then finalize, carbon pollution standards for new power plants. In this action, EPA plans to establish new source performance standards (NSPS) for new electric utility generating units (EGUs) under the authority of section 111 of the Clean Air Act.

Timetable:

EPA intends to issue new proposed carbon pollution standards by September 20, 2013, and final standards within one year of publication of the proposal.

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

This action does not rely on new science. This action will rely on the identification of existing, proven technologies to set achievable emission standards that, by statute, offer the "best system of emission reduction" (BSER).

Scientific questions to be addressed and approach:

This is a technology based rule (as described above).

Plans for scientific analyses and peer review:

See description above.

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units (AQ91)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?		X

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency	X		
Addresses areas of substantial uncertainties	X		
Involves major environmental risks	X		
Relates to emerging environmental issues	X		
Exhibits a long-term outlook		X	

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

The SAB Work Group recommends that the SAB review The Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units (2060-AQ91). This action involves development of new performance standards for greenhouse gas emissions (CO₂) from new Electric Utility Generation Units (EGUs) under new source performance rules. The SAB should consider this action¹ for review because: (1) the Work Group could not determine, from the information provided by the Agency, whether there was an adequate scientific and technological basis for the proposed provisions to achieve emissions

¹ Administrator McCarthy signed the proposed Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units on September 20, 2013.

reductions in coal-fueled EGUs and (2) based on information provided to the Work Group, whether the peer review of the scientific and technical information supporting the action appears to be inadequate.

The Agency's expectation is that new power plants will utilize natural gas combined cycle technology to implement this proposal. The EPA considered industry trends, available technology, and best systems of emission reduction to develop the proposal. The Agency concludes that the proposed standard will not be technology forcing for such plants.

In the fact-finding call held on September 26, 2013, the EPA Staff explained that should new EGUs not utilize natural gas and opt for coal as a fuel source, these new coal plants will need to implement new carbon capture and storage (CCS) technologies to meet the standards. The EPA is identifying partial CCS as a viable technology for new efficient coal units that would meet the criteria of the best system of emission reduction (BSER) for implementation of the proposed standards. In setting BSERs, the EPA considers the standard and whether: the system is technically feasible; the costs are reasonable; the amount of emissions achieved by the technology meets the standard; and does the proposal promotes the implementation and further development of a technology.

EPA Staff explained that the CCS provisions are based on three examples of implementing partial CCS and the strong demonstration these facilities make for the technology (See Attachment C). They stated that this proposal relies on existing sequestration studies and reporting requirements for carbon capture and does not anticipate additional research. The Work Group finds that the scientific and technical bases for carbon storage provisions are new science and the rulemaking would benefit from SAB review.

The Work Group also finds that there may be specific new science and technology related to the understanding of CCS and BSERs for coal-fired or integrated gasification and combined cycle EGUs, but not natural gas combined cycle EGUs. The SAB review could assess: 1) the EPA assumptions regarding the status of CCS technology; 2) the possible/probable development path of CCS technologies; and 3) implications for performance and cost of these types of technologies applied to coal combustion and integrated gasification and combined cycle plants.

The EPA Staff cited Department of Energy National Energy Technology Laboratory (NETL) studies as well as existing EGUs under construction and in advanced stages of development as the basis for the BSER assumptions for new natural gas and coal fuel sources for new EGUs. EPA staff explained that the NETL studies are all peer reviewed and EPA did not conduct additional peer review(s).

The SAB Staff requested additional information on the technological basis and peer review for the action from OAR and NETL. OAR Staff notes that the EPA relied on information NETL released in a series of reports on the *'Cost and Performance Baselines for Fossil Energy Plants.'* The studies were conducted to establish estimates for the cost and performance of combustion and gasification based power plants as well as options for co-generating synthetic natural gas and fuels, all with and without carbon dioxide capture and storage. Volume 1 of these

studies explains that ... “[t]he initial results of this analysis were subjected to a significant peer review by industry experts, academia and government research and regulatory agencies.”²

NETL Staff responded that “reviewers were sent the report and given several weeks for review and the regulatory agency that provided the review was the EPA.” NETL noted that this peer review process was specifically tailored for this report and NETL does not have a publically-available description of the review. NETL staff also notes that all the information presented for coal-fueled sources was not peer reviewed.³

The Work Group finds that the peer review of the scientific and technical information supporting the action information appears to be inadequate.

² Volume 1 of the series – “Cost and Performance Baseline for Fossil Energy Power Plants, Volume 1: Bituminous Coal and Natural Gas to Electricity” (and subsequent updates) – available at http://www.netl.doe.gov/energy-analyses/baseline_studies.html

³ August 2011 report "Cost and Performance of PC and IGCC Plants for a Range of Carbon Dioxide Capture" which modified the CO₂ capture rates for select cases presented in the "Cost and Performance Baseline for Fossil Energy Plants" did not undergo peer review. That report can be found here: <http://www.netl.doe.gov/energy-analyses/refshelf/PubDetails.aspx?Action=View&PubId=396>

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Name of action: Pesticides; Agricultural Worker Protection Standard Revisions (40 CFR 170)

RIN Number: 2070-AJ22

EPA Office originating action: OCSPP/OPP

Brief description of action and statement of need for the action:

EPA is developing a proposal under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to revise the federal regulations that direct agricultural worker protection (40 CFR 170). The changes under consideration are intended to improve agricultural workers' ability to protect themselves from potential exposure to pesticides and pesticide residues. In addition, EPA is proposing to make adjustments to improve and clarify current requirements and facilitate enforcement. Other changes sought are to bring hazard communication requirements more in line with Occupational Safety and Health Administration requirements and make improvements to pesticide safety training, with improved worker safety the intended outcome. The potential need for change arose from EPA discussions with key stakeholders beginning in 1996 and continuing through 2004. EPA held nine public meetings throughout the country during which the public submitted written and verbal comments on issues of their concern. In 2000 through 2004, EPA held meetings where invited stakeholders identified their issues and concerns with the regulations.

Timetable:

Applicable Deadlines: None

Regulatory Agenda: NPRM 02/00/2014

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

No.

Scientific questions to be addressed and approach:

N/A.

Plans for scientific analyses and peer review:

Science Advisory Panel (FIFRA Sec. 25(d)) waived review on 2/20/2013.

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Pesticides; Agricultural Worker Protection Standard Revisions (2070-AJ22)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X*
Is the action primarily administrative (i.e., involve reporting or record keeping)?	X	
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

*The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) waived review on 2/20/2013. Members are listed here: <http://www.epa.gov/scipoly/sap/members.htm>

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency		x	
Addresses areas of substantial uncertainties		x	
Involves major environmental risks		x	
Relates to emerging environmental issues			x
Exhibits a long-term outlook			x

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration. EPA is developing a proposal under the Federal Insecticide, Fungicide and Rodenticide Act to revise the federal regulations that direct agricultural worker protection (40 CFR 170). The changes under consideration are intended to improve agricultural workers' ability to protect themselves from potential exposure to pesticides and pesticide residues. EPA is also proposing to make adjustments to improve and clarify current requirements and facilitate enforcement. Other changes sought are to bring hazard communication requirements more in line with Occupational Safety and Health Administration

requirements and make improvements to pesticide safety training, with improved worker safety the intended outcome. The potential need for change arose from EPA discussions with key stakeholders beginning in 1996 and continuing through 2004. EPA held nine public meetings throughout the country during which the public submitted written and verbal comments on issues of their concern. In 2000 through 2004, EPA held meetings where invited stakeholders identified their issues and concerns with the regulations.

Name of action: PCB Use Authorizations

RIN Number: 2070-AJ38

EPA Office originating action: Office of Chemical Safety and Pollution Prevention

Brief description of action and statement of need for the action: EPA's regulations governing the use of Polychlorinated Biphenyls (PCBs) in electrical equipment and other applications have not been updated since 1998. EPA has initiated rulemaking to reassess the ongoing authorized uses of PCBs to determine whether certain use authorizations should be ended or phased out because they can no longer be justified under section 6(e) of the Toxic Substances Control Act, which requires that the authorized use will not present an unreasonable risk of injury to health and the environment. As the first step in this reassessment, EPA published an Advanced Notice of Proposed Rulemaking (ANPRM) on April 7, 2010 and took comment through August 20, 2010. EPA reviewed and considered all comments received on the ANPRM in planning the current rulemaking. This action will address the following specific areas: (1) the use, distribution in commerce, marking and storage for reuse of liquid PCBs in electric equipment; (2) improvements to the existing use authorization for natural gas pipelines; and (3) definitional and other regulatory "fixes." The reassessment of use authorizations related to liquid PCBs in equipment will focus on small capacitors in fluorescent light ballasts, large capacitors, transformers and other electrical equipment. In addition, revised testing, characterization, and reporting requirements for PCBs in natural gas pipeline systems to provide more transparency for the Agency and the public when PCB releases occur will be considered. Consistent with Executive Order 13563, "Improving Regulation and Regulatory Review," wherever possible and consistent with the overall objectives of this rulemaking, the Agency will also eliminate or fix regulatory inefficiencies noted by the Agency or in public comments on the ANPRM.

Timetable:

Applicable Deadlines: None

Regulatory Agenda: NPRM publication: 07/00/2014 (Designated as a Long-Term action)

Does the action rely on science that meets the EPA *Peer Review Handbook* definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

As per the Agency's Peer Review Handbook, none of the analyses proposed are expected to require external peer review. Generally all influential scientific and technical work products used in decision making should be peer reviewed. The process of determining whether a supporting scientific and/or technical work product is "influential" takes into account circumstances surrounding the use of the work product. The Agency's Peer Review handbook provides that "the novelty or controversy associated with the work product may determine whether it is influential scientific information. Influential scientific information may be novel or innovative, precedential, controversial, or emerging ('cutting edge')." PCBs have well established and thoroughly studied adverse health effects in both humans and wildlife, with studies dating back to 1937. The scientific work products associated with this action are not expected to present any novel or controversial issues necessitating external peer review.

Scientific questions to be addressed and approach:

N/A

Plans for scientific analyses and peer review:

N/A

Recommendation from the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science

Name of planned action: Polychlorinated Biphenyls (PCBs); Reassessment of Use Authorizations (2070-AJ38)

Please respond to the following questions based on the short description EPA provided for the planned action.

	Yes	No
Is the action planned or under review by the SAB? If not, has EPA identified other high-level external peer review (i.e., by the NAS, CASAC, or FIFRA SAP)?		X
Is the action primarily administrative (i.e., involve reporting or record keeping)?		X
Has EPA characterized the action as one that has "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"		X
Is the action an extension of an existing initiative?	X	

Please indicate whether the action merits a high, medium or low level of interest regarding the following historical SAB science- and problem-driven criteria, based on the short description EPA provided for the planned action.

	High	Medium	Low
Involves scientific approaches that are new to the agency			X
Addresses areas of substantial uncertainties			X
Involves major environmental risks		X	
Relates to emerging environmental issues			X
Exhibits a long-term outlook			X

Please provide a recommendation regarding whether the SAB should consider this action for review and comment on the adequacy of the supporting science and provide a brief rationale.

This action does not merit further SAB consideration. EPA's regulations governing the use of polychlorinated biphenyls (PCBs) in electrical equipment and other applications have not been updated since 1998. EPA has initiated rulemaking to reassess the ongoing authorized uses of PCBs to determine whether certain use authorizations should be ended or phased out because they can no longer be justified under section 6(e) of TSCA, which requires that the authorized use will not present an unreasonable risk of injury to health and the environment. OCSPP confirmed that this action will address the following specific areas: (1) the use, distribution in commerce, marking and storage for reuse of liquid PCBs in electric equipment; (2)

improvements to the existing use authorization for natural gas pipelines; and (3) definitional and other regulatory fixes. OCSPP confirms that the proposed rule will only address the following specific areas of PCB use: (1) the use, distribution in commerce, marking and storage for reuse of liquid PCBs in electric equipment; (2) improvements to the existing use authorization for natural gas pipelines; and (3) definitional and other regulatory “fixes.”