

May 13, 2014

MEMORANDUM

SUBJECT: Preparations for Chartered Science Advisory Board (SAB) Discussions of EPA Planned Agency Actions and their Supporting Science in the Fall 2013 Regulatory Agenda

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

At the upcoming June 11, 2014 public meeting, the Chartered SAB will discuss whether to review the adequacy of the science supporting planned regulatory actions identified by the EPA as major actions in the Fall 2013 semi-annual regulatory agenda. To support this discussion, a SAB Work Group was charged with identifying actions for further 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 Work Group 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.

EPA's current process (Attachment A) is to provide the SAB with information about the publication of the semi-regulatory agenda and to provide short descriptions of major planned actions that are not yet proposed but appear in the semi-annual regulatory agenda. 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 adopted by the Chartered SAB (Attachment B) to initiate its review of major planned actions identified in the Regulatory Agenda by EPA. The current SAB review began when the EPA Office of Policy informed the SAB Staff Office that the Fall 2013 Unified (Regulatory) Agenda and Regulatory Plan had been published on November 26, 2013. This semi-annual regulatory agenda is available at <http://www.reginfo.gov/public/>.

This SAB Work Group was formed in February 2014 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), Peter M. Chapman, Taylor Eighmy, H. Christopher Frey, Kimberly L. Jones and Kristina D. Mena.

On March 24 2014, the Work Group received short descriptions of the major planned actions that were not yet proposed and are listed in the Fall 2013 semi-annual regulatory agenda. The Office of Air also included a planned action, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2, identified by President Obama as a priority action that was not yet listed in the Regulatory Agenda. After reviewing the information provided by EPA, SAB Work Group members informed the Designated Federal Official (DFO) of additional information needed to assist them in identifying priority actions for SAB advice and comment. The SAB Staff DFO obtained the requested information from the EPA program offices as requested by the Work Group. Attachment C provides a summary of the additional information requested by the Work Group and the responses provided by the EPA. The Work Group has concurred on the recommendations in this memorandum.

In developing these recommendations, the Work Group considered the information and descriptions of planned actions that were identified by the EPA as “major actions.” The Work Group considered the following 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 five major actions considered by the Work Group. This attachment includes brief agency descriptions of the planned actions, the Work Group recommendations, and supporting rationales.

The Work Group concluded that none of the five major actions identified by the agency merit SAB consideration on the adequacy of the science supporting the planned action. The Work Group based their recommendations on information received from the EPA, the Work Group’s research, and the agency’s analyses and peer reviews for the planned actions. The Work Group identified issues and areas for the agency to consider as they conduct analyses and develop charges for peer reviews. More detailed discussion of the issues the Work Group identified, information provided by the agency, and rationale to support the recommendation for each of the planned actions is available in Attachments C and D.

Table 1 identifies the five planned actions reviewed and summarizes the Work Group’s recommendations.

Table 1: Summary of Proposed Actions that the SAB Work Group considered for additional SAB Comment on the Supporting Science		
RIN¹	Planned Action Title	Workgroup recommendation
2060-AR88	Standards of Performance for Greenhouse Gas Emissions from Modified Sources: Electric Utility Generating Units	No further SAB consideration is merited.
2060-AS16	Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2	No further SAB consideration is merited.
2050-AG74	Additions to List Section 241.4 Categorical Non-Waste Fuels	No further SAB consideration is merited.
2050-AG77	Hazardous Waste Export-Import Revisions Rule	No further SAB consideration is merited.
2040-AF03	Development of Best Management Practices for Recreational Boats under § 312(o) of the Clean Water Act	No further SAB consideration is merited.
<p>1. The Regulatory Identification Number provides a hyperlink to the Office of Management and Budget’s webpage and information on the planned action provided in the Regulatory Agenda. Note that action 2060-AS16 is not included in the Fall 2013 Regulatory Agenda and the EPA is including the action for consideration. The hyperlink is to the EPA webpage for the action.</p>		

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

The Work Group thanks the EPA for providing more complete and timely information to inform the SAB’s decisions regarding the science supporting planned agency actions than was provided for past SAB reviews of the agency’s regulatory agenda. The Work Group also recognizes that the EPA also included a planned action that was not yet listed in the regulatory agenda in order to provide early consideration of the action.

The SAB Work Group strongly encourages the EPA to continue to enhance descriptions of future planned actions by providing specific information on the peer review of the associated science and more

description of the scientific and technological bases for the actions. The EPA should provide such information in the initial descriptions provided to the work group in its initial descriptions of planned agency actions.

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 responses to questions sent to National Program Offices at the SAB Work Group's request.
- Attachment D: Descriptions of Major EPA Planned Actions Identified in the Fall 2013 Semi-Annual Regulatory Agenda with SAB Work Group Recommendations.

Attachment A

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. (see page p. 9)
- ◆ 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 January 2, 2013, 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

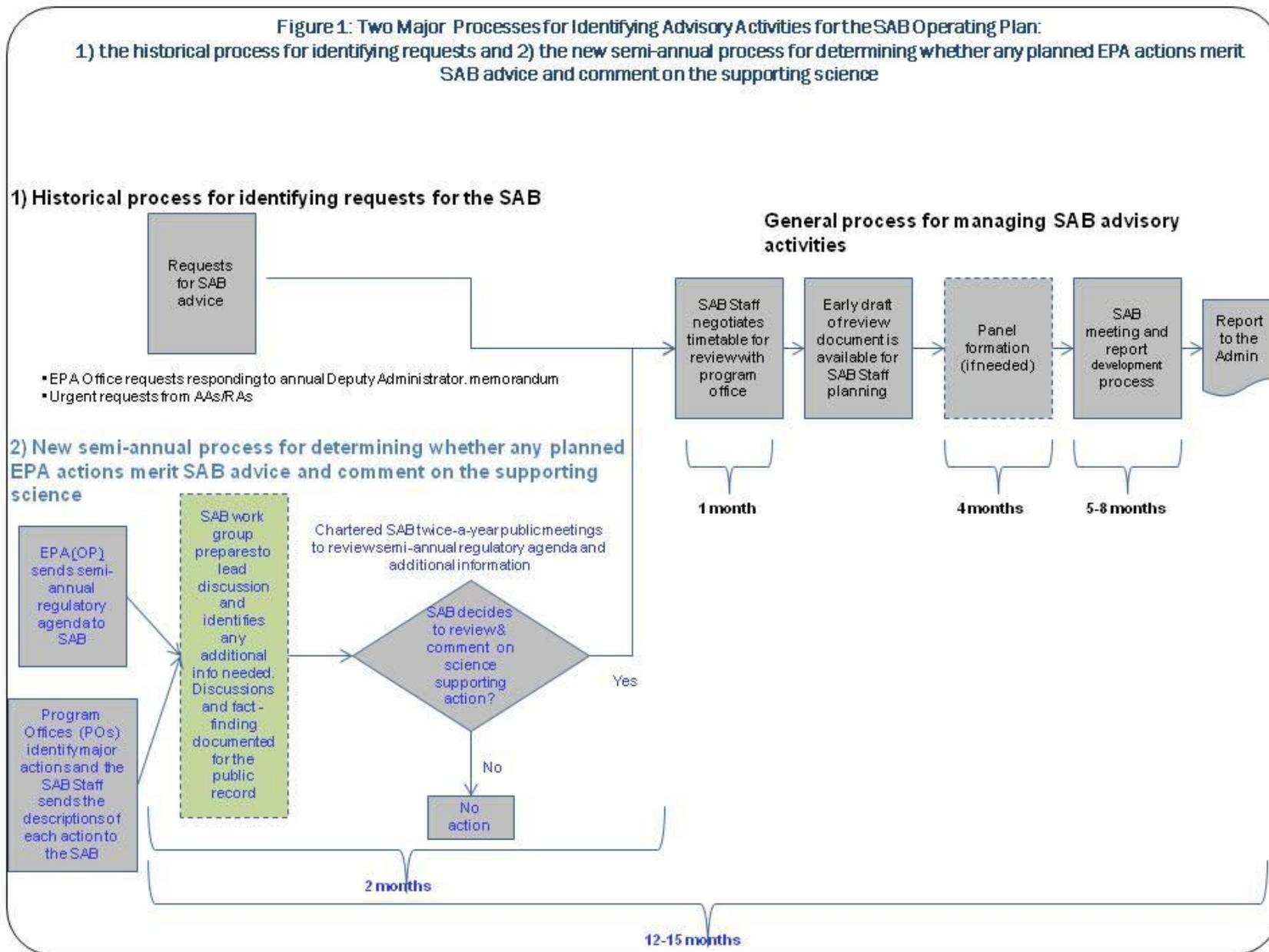
Attachment A: Identifying EPA Planned Actions for SAB Consideration

- ◆ 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.

SAB Process

- ◆ The SAB Staff manages the 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).

Attachment A: Identifying EPA Planned Actions for SAB Consideration



**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

Attachment A: Identifying EPA Planned Actions for SAB Consideration

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

Attachment A: Identifying EPA Planned Actions for SAB Consideration

(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.)



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

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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

Glenn Paulson
Science Advisor

Vanessa Vu, Director
SAB Staff Office

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.

Attachment A: Identifying EPA Planned Actions 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*.

Attachment A: Identifying EPA Planned Actions for SAB Consideration

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

Attachment A: Identifying EPA Planned Actions for SAB Consideration

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 up to four 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.

Attachment B: SAB Process to Discuss EPA Planned Actions and their Supporting Science

- 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 or meeting to consider the preliminary recommendations from the SAB Work Group to provide advice and comments on the adequacy of the scientific and technical basis of the planned action. At that time, the SAB will identify any other information that may be needed for decision making.
- If needed, the Chartered SAB will hold additional teleconference(s) or meeting(s) to consider additional information provided to complete the deliberations and determine whether any actions merit SAB additional consideration. The SAB Chair will document the SAB's determination in a letter to the Administrator.

Past SAB Discussions about EPA Planned Actions

- [SAB Discussions about EPA Planned Actions in the Fall 2012 Unified \(Regulatory\) Agenda and their Supporting Science](#)
- [SAB Discussions about EPA Planned Actions in the Spring 2013 Unified Agenda and their Supporting Science](#)

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 Work Group’s
Fact-Finding on EPA Planned Actions in the
Fall 2013 Regulatory Agenda
May 12, 2014

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 Fall 2013 regulatory agenda provided by the Agency on November 26, 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 March 24, 2014 the Work Group received short descriptions from the EPA Program Offices on the major planned actions that are not yet proposed listed in the Fall 2013 semiannual regulatory agenda. The Work Group exchanged comments via email requested additional information from the EPA through the Designated Federal Officer. The Work Group’s questions and the Agency’s responses are provided in this attachment

Summary of Additional Information and Agency Responses

Additions to List Section 241.4 Categorical Non-Waste Fuels (2050-AG74)

Questions from the Work Group for the Office of Solid Waste and Emergency Response (OSWER)

- 1) Did EPA obtain and compare data on contaminant levels for traditional fuels and the creosote treated railroad ties (CTRTR) prior to combustion?

OSWER Response: Per the petition process for categorical non-wastes under 40 CFR 241.4(b), information on contaminants in CTRTR was compiled by petitioners (MA Energy Resources, URS on behalf of American Association of Railroads and AF&PA). That contaminant data was then compared to information on traditional fuels (biomass [including wood] and fuel oil) collected by EPA from Agency databases and literature sources. In the proposal, the Agency also requested any additional contaminant data that should be considered before finalizing the rule.

- 2) If they did collect these data, were the data comparable to, or less than, those in traditional fuels which the combustion unit is designed to burn?

OSWER Response: The comparison of CTRT contaminant data described above indicated that fluorine and nitrogen in CTRT were not comparable to fuel oil while those same contaminants were comparable to biomass. The contaminant data also showed that semi-volatile organic compounds were not comparable to biomass, while the SVOCs were comparable to fuel oil. Thus, under the proposed rule, CTRT could only be combusted in units designed to burn both biomass and fuel oil. In the proposal, the Agency is also considering an approach that would include CTRT combusted in units designed to burn both biomass and fuel oil, but those units had switched to natural gas, a cleaner burning fuel.

Development of Best Management Practices (BMPs) for Recreational Boats under § 312(o) of the Clean Water Act (2040-AF03)

Questions from the Work Group sent to the Office of Water (OW) staff. Thomas Carpenter (the Designated Federal Officer) met with the staff from the EPA's OW to discuss what additional information is available in response to questions on the BMPs for Recreational Boats under the CWA (2040-AF03).

- 1) The SAB Work Group recognizes the importance of addressing invasive species. Is there additional information about the scope of the action?

OW Response: The Agency maintains a webpage that provides information on the scope of this action, its history, public participation, and aquatic nuisance species. (<http://water.epa.gov/lawsregs/lawsguidance/cwa/vessel/CBA/about.cfm>).

The Agency has held public meetings and webinars to solicit information and receive public comments. Transcripts of the public meetings and a webcast of the webinar are available

at: <http://water.epa.gov/lawsregs/lawsguidance/cwa/vessel/CBA/participate.cfm>

OW staff also noted that states developed best management practices in cooperation with Sea Grant universities and much of the science and foundation of the BMPs are available in the literature and internet. The BMPs for statewide or water body specific BMPs often consider water body and species specific factors that cannot be addressed in a national rule.

- 2) When does EPA plan on conducting the expert work shop? Can EPA provide more detail on the content of the work shop or potential participants (i.e., agenda, charge to work shop participants, or preliminary roster)?

OW Response: EPA is still in the planning stages for an expert work shop and is evaluating available resources to conduct a contractor led review, a virtual work shop, or a face-to face work shop. An agenda, preliminary charge or potential roster have not been developed.

Attachment D
Descriptions of Major EPA Planned Actions in the
November 2013 Semi-Annual Regulatory Agenda with
SAB Work Group Draft Recommendations for the Chartered SAB

May 13, 2014

On March 24, 2014, the Work Group received short descriptions from the EPA Program Offices on the major planned actions that are not yet proposed and are newly listed in the November 26, 2013 semiannual regulatory agenda. The Office of Air and Radiation included Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2 for SAB consideration rather than wait for the action to be included in future regulatory agendas. The Work Group reviewed the information and researched the planned actions, identified questions for additional information about some of the planned actions, and developed draft recommendations for discussion among Work Group members. This document provides the EPA descriptions, draft recommendations developed by the Work on the planned actions and the rationale supporting the recommendations.

RIN ¹	Office	Full Title	Fall 2013 Stage	Page
2060-AR88	OAR / OAQPS	Standards of Performance for Greenhouse Gas Emissions from Modified Sources: Electric Utility Generating Units	Proposed Rule	1
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¹ The Regulatory Identification Number provides a hotlink to the Office of Management and Budget's webpage and information on the planned action provided in the Regulatory Agenda. Note that action 2060-AS16 is not included in the 2013 Fall Regulatory Agenda and EPA is including the action for consideration. The hyperlink is to the EPA webpage for the action.

EPA's Description of the Planned Action

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

RIN Number: 2060-AR88

EPA Office originating action: OAR/OAQPS

Brief description of action and statement of need for the action: Proposal and finalization of performance standards for modified and reconstructed EGUs are action items in President Obama's Climate Action Plan (CAP). The risk addressed by this rule is the current and future threat of climate change to public health and welfare, as demonstrated in the 2009 Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. The EPA made this determination based primarily upon the recent, major assessments by the U.S. Global Change Research Program (USGCRP), the National Research Council (NRC) of the National Academies and the Intergovernmental Panel on Climate Change (IPCC). Reconstructed sources are defined as existing sources that replace components to such an extent that the capital costs of the new components exceed 50 percent of the capital costs of an entirely new facility, and for which compliance with standards of performance for new sources is technologically and economically feasible. A modified source is one that undertakes a physical change that increases the source's maximum achievable hourly rate of emissions.

Timetable: In the "Presidential Memorandum – Power Sector Carbon Pollution Standards" (June 25, 2013), the EPA was directed to issue proposed carbon pollution standards for modified and reconstructed power plants by June 2014 and to issue final standards for those sources by June 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?"

No, the rule development for standards of performance for modified and reconstructed EGUs will not rely on highly influential scientific or technical work as defined in the EPA Peer Review Handbook. The proposed standards of performance would regulate GHG emissions from reconstructed and modified fossil fuel-fired electric steam generating units (utility boilers and IGCC units) and natural gas-fired stationary combustion turbines. Under the EPA's regulations covering CAA section 111 standards of performance for new stationary sources, reconstructed sources are defined as existing sources (i) that replace components to such an extent that the capital costs of the new components exceed 50 percent of the capital costs of an entirely new facility, and (ii) for which compliance with standards of performance for new sources is technologically and economically feasible. The CAA and EPA's regulations define an NSPS "modification" as a physical change that increases the source's maximum achievable hourly rate of emissions, with certain exceptions.

Triggering the reconstruction provision is a very high bar; and the EPA is only aware of one EGU that has triggered reconstruction and it was the result of an industrial accident that resulted in a near

rebuild of the entire unit. As such we do not expect there to be many (if any) reconstructed units. Potential regulatory approaches that are being considered would include a numerical standard based on best-performing applicable generating technology (e.g., supercritical steam cycle). A requirement for carbon capture and storage is not being considered as the best system of emission reduction for these units.

Historically, few EGUs have notified EPA that they have modified - an increase in the hourly rate for pollutants most often results from an increase in the ability to combust fuel. Increases in a pollutant that are a result of the installation of a pollution control technology (e.g., chemically produced CO₂ from a wet flue gas desulfurization scrubber) are not considered NSPS modifications (pollution control project exemption). As such, we also expect there to be very few units that trigger the modification provision. Regulatory approaches that are being considered would include a unit-specific numerical standard based on efficiency improvements that are achievable at the unit or a national standard based on best generating technology. As with the standards for the reconstructed units, a requirement for carbon capture and storage is not being considered as the best system of emission reduction for these units.

The EPA does not believe that this action will have a major impact, involves precedential, novel, and/or controversial issues – as we expect there to be no reconstructed units and very few (if any) modified units. The EPA does not anticipate a need to rely on highly influential scientific or technical work for this proposed rulemaking.

Scientific questions to be addressed and approach: The EPA is considering two types of standards: those for modified units and those for reconstructed units. For modified units, EPA does not plan to do a bottom up technical assessment of engineering options to improve efficiency, rather EPA plans to set a data driven standard based on requiring sources to meet standards consistent with their own historical best practice. For reconstructed sources, standards will be based on the performance of existing technology (e.g. super-critical boilers). We will use peer reviewed information to support the performance levels for these standards.

Plans for scientific analyses and peer review: As stated above this action will affect very few – if any – sources. We do not believe that it will have a major impact, involve precedential, novel, or controversial technical issues. Thus, we do not believe that peer review is necessary for this work. As explained above, EPA will be using reported performance data to set modified source standards. Reconstructed standards will be based on performance of existing technologies (e.g. super-critical boilers) Performance information for these units will be based on DOE/NETL cost and performance studies. The DOE studies have been peer reviewed and the information that EPA is using from them is well established and consistent with cost and performance from many other sources (e.g. EIA).

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 Modified Sources: Electric Utility Generating Units (2060-AR88)

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.

Recommendation. This action does not merit further SAB consideration.

EPA states that they do not believe that this proposed action will have a major impact, that it does not involve precedential, novel, and/or controversial issues, and that it does not rely on highly influential scientific or technical work. EPA does not expect many facilities to trigger the reconstruction or modification provisions of the proposed rule. In regard to this statement, the Work Group notes there is a long history of litigation pertaining to whether a modified facility

triggers New Source Review under existing permitting rules for other pollutants. However, EPA indicates that a requirement for carbon capture and storage is not being considered, and that a unit-specific numerical standard based on achievable efficiency standards based on best generating technology would be developed. This may be somewhat analogous to “best available control technology” determinations that are routinely made as part of NSR permitting, although EPA does not specifically state it this way.

EPA indicates that performance information will be based on Department of Energy’s National Energy Technology Laboratory (DOE/NETL) cost and performance studies. We note that such studies have had some review, but not necessarily technical peer review with consideration that the data would be used for regulatory purposes. Thus, EPA is encouraged to seek additional review of the DOE/NETL cost and performance studies to increase confidence in their suitability for EPA’s purpose. However, a review by SAB is not recommended, as the methods and procedures to be used appear to be similar to those in use by other regulatory programs.

EPA's Description of the Planned Action

Name of action: Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2

RIN Number: 2060-AS16

EPA Office originating action: OAR/OTAQ

Brief description of action and statement of need for the action: Proposal and finalization of new emission standards for greenhouse gases and fuel efficiency for medium- and heavy-duty highway vehicles are action items in President Obama's Climate Action Plan. These standards will require incremental improvement beyond what was required by the September 15, 2011 Phase 1 rule (Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, 75 FR 57106). This second set of standards would further reduce greenhouse gas emissions and fuel consumption from a wide range of on-road vehicles from semi-trucks to the largest pickup trucks and vans, and all types and sizes of work trucks and buses. As with the Phase 1 rule, these Phase 2 standards will be performance standards that allow manufacturers to choose the emission control technology that works best for their products. EPA will set the emission standards based on its assessment of the technologies that can be incorporated into medium- and heavy-duty trucks in future model years with appropriate consideration of the costs and lead time associated with those technologies, along with consideration of the environmental benefits.

Given the relationship between greenhouse gas emissions and fuel consumption for highway vehicles, this rule is being promulgated jointly with the National Highway Traffic Safety Administration (NHTSA). EPA will adopt greenhouse gas emission standards under the Clean Air Act and NHTSA will adopt fuel efficiency standards under the Energy Independence and Security Act.

Timetable: On February 18, 2014, the President directed EPA and NHSTA to jointly issue proposed greenhouse gas and fuel efficiency standards for medium- and heavy-duty trucks by March 2015, and to issue final standards by March 2016.

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 will utilize several work products that are scientific and/or technical in nature. As described below, most would not otherwise qualify as "an influential scientific or technical work product". However, EPA has determined that revisions to its emission simulation tool may qualify as an influential technical work product. The emission simulation tool will be a modified version of EPA's peer-reviewed Greenhouse Gas Emission Model (GEM). The original version of GEM is a computer model that calculates CO₂ emissions and fuel consumption of heavy-duty vehicles based on certain vehicle parameters. GEM is currently used to evaluate emission performance of trucks for regulatory compliance purposes for the Phase 1 standards. For Phase 2, EPA plans to revise the

model to include additional technical inputs to evaluate a broader range of emission control technologies.

The other technical work products consist of routine emission data (and related data) collection consistent with long-standing EPA and/or industry measurement procedures. This will include primarily emission measurements from engines and data from vehicle coastdowns. These data will allow EPA to determine the extent to which emission control technologies can be used to reduce greenhouse gas emissions and fuel consumption. As routine data collection, however, these products will not be novel or controversial and will not set new precedents. They will also not meet any of the other criteria contained in EPA Peer Review Handbook for influential technical work products. Similarly, our analysis of technology costs will be conducted using existing cost methodologies and will not meet any of the criteria contained in EPA Peer Review Handbook for influential technical work products.

Scientific questions to be addressed and approach: EPA will evaluate the cost and effectiveness of existing emission control technologies as well as relevant emission control technologies to determine the appropriate performance level for the Phase 2 standards. For evaluating emission control effectiveness, EPA will consider:

- Existing truck and engine emission test data
- Truck and engine emission test data collected by EPA
- Truck and engine emission test data collected by manufacturers and contractors
- National Academy of Sciences Reports on the effectiveness of these emission control technologies (an existing 2010 report and a soon to be released 2014 report)

The new emission data will be collected according to EPA's long-standing emission measurement procedures specified in 40 CFR part 1065. Costs will be evaluated using the types of methodologies used in the Phase 1 rule and the prior greenhouse gas rules for light-duty vehicles.

As part of this rule, EPA will need to determine how to evaluate emission performance of trucks for regulatory compliance purposes. For the Phase 1 rule, EPA relied on its peer-reviewed Greenhouse Gas Emission Model (GEM). For Phase 2, EPA plans to revise the model to include additional technical inputs to evaluate a broader range of emission control technologies.

Plans for scientific analyses and peer review:

The science underlying collection and analysis of vehicle emissions data is generally well-defined. However, EPA has identified revisions to GEM as potentially falling under the category of Influential Scientific Information (ISI) and is following the guidelines in EPA's Peer Review Handbook for peer-review of this work. The prior version of GEM was peer-reviewed by a panel of four independent subject matter experts (from academia and a national laboratory) as part of the Phase 1 rule. EPA plans to have the revised version of GEM peer-reviewed in a similar manner later this year.

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

Name of planned action Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2 (2060-AS16)

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 ²	
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.

Recommendation. This action does not merit further SAB consideration.

This rule making focuses on Phase 2 performance standards that will allow manufacturers to choose emission control technologies that work best for their products. As part of Phase 2 of this rule, EPA will revise the peer-reviewed Greenhouse Gas Emission Model (GEM) and will have it reviewed by

² The description provided by the EPA's OAR staff states that "EPA has determined that revisions to its emission simulation tool may qualify as an influential technical work product."

a panel of four independent subject matter experts later this year. The revision to GEM may qualify as an influential technical work product and the planned review by subject matter experts would satisfy requirements for review of such products. EPA will also make use of routine emissions data, including emissions measurements from engines and “data from vehicle coastdowns.”

EPA should be aware that methods to reduce greenhouse gas emissions from medium- and heavy-duty vehicles are not limited to engine or emission prevention and end-of-pipe controls, but also can include technologies and approaches to reduce factors such as rolling resistance, auxiliary loads, parasitic loads, and aerodynamic drag. Thus, it is not clear if the approach that EPA is taking is based solely on the use of data from engine dynamometer tests, which would not account for many of these factors, or chassis dynamometer tests, which would also not account for some of these factors. EPA indicates they will consider a soon to be released report by the National Academy of Sciences (NAS). Overall, EPA will conduct a review of GEM and “consider” information from the NAS, while making use of “routine emission data (and related data).” Therefore, this action does not merit further SAB consideration.

EPA's Description of the Planned Action

Name of action: NHSM - Additions to Categorical Non-Waste Fuels (Non-Hazardous Secondary Material); SAN 5703

RIN Number: 2050-AG74

EPA Office originating action: OSWER

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

In the previous February 2013 Non-Hazardous Secondary Materials (NHSM) final rule, EPA identified a number of non-hazardous secondary materials that it considered to be good candidates for a categorical listing. Categorical listings generally allow facilities combusting NHSMs to determine that their materials are not wastes without having to evaluate those materials under the general case-by-case standards and procedures that would otherwise apply. The rule indicated that two NHSMs — paper recycling residuals (including OCC rejects) and construction and demolition debris processed pursuant to best practices—would be good candidates for a future proposal based on information provided to the Agency and expected to propose those listings in a subsequent rulemaking. Based on information provided by industry trade organizations, the Agency also identified creosote-treated railroad ties as a potential candidate for a categorical non-waste listing. However, in order to inform the scope of that non-waste category, the Agency indicated that additional information would be needed. If that information supports a listing of creosote ties as a categorical non-waste, the Agency indicated that it expected to propose a categorical listing for that material as well.

These determinations follow the criteria set out in §241.4(b)(5) to assess categorical non-waste petitions. Pursuant to these criteria, supporting information needs to demonstrate that each NHSM has not been previously discarded (*i.e.*, was not initially abandoned or thrown away), or if discarded, has been sufficiently processed, and is legitimately used as a product fuel. Under 40 CFR 241.3(d)(1), the legitimacy criteria for fuels include: 1) management of the material as a valuable commodity based on the following factors—storage prior to use must not exceed reasonable time frames, and management of the material must be in a manner consistent with an analogous fuel, or where there is no analogous fuel, adequately contained to prevent releases to the environment; 2) the material must have a meaningful heating value and be used as a fuel in a combustion unit that recovers energy; and 3) the material must contain contaminants at levels comparable to or less than those in traditional fuels which the combustion unit is designed to burn

In comparing contaminants between traditional fuel(s) and a non-hazardous secondary material, persons can use data for traditional fuel contaminant levels compiled from national surveys, as well as contaminant level data from the specific traditional fuel being replaced. To account for natural variability in contaminant levels, persons can use the full range of traditional fuel contaminant levels, provided such comparisons also consider variability in non-hazardous secondary material contaminant levels. Such comparisons are to be based on a direct comparison of the contaminant levels in both the non-hazardous secondary material and traditional fuel(s) prior to combustion.”

The information (including supporting tests or studies) must also demonstrate that each NHSM is used as a non-waste fuel in a combustion unit because it either meets the legitimacy criteria as described above or, if the NHSM does not meet the legitimacy criteria, that the NHSM is a legitimate product fuel, after balancing the legitimacy criteria with other relevant factors (e.g. the non-hazardous secondary material is integrally tied to production practices, or the material is functionally the same as the comparable traditional fuel, etc.).

This proposed action demonstrates the Agency's commitment from its previous NHSM rulemakings that it would consider adding additional non-hazardous secondary materials to the categorical listings. This action also reflects the Agency's commitment to advance sustainability objectives in its actions, including in its rules development.

Timetable:

The proposed rule is in the very final stages of OMB EO 12866 review and should be cleared soon to head to Administrator's signature. OMB began review on 9/7/13, but due to the federal government shutdown, the end of the 90-day review was extended to 12/23/14. A 30-day extension to OMB review was then granted until 1/22/14. Given the various delays, the Agency is eager to conclude OMB review in a matter of days.

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 proposed determinations regarding processed C&D wood, paper recycling residuals, and creosote-treated railroad ties are based on information submitted during the February 2013 rulemaking effort, as well as supplementary information received since issuance of the rule. The criteria EPA used to assess these NHSMs as categorical non-wastes matches the criteria discussed above and used by the Administrator to determine whether to grant or deny the categorical non-waste petitions.

The overall standards for determining if an NHSM is a legitimate non-waste fuel, including contaminant comparisons in the NHSM to the traditional fuel described above, has undergone extensive prior public comment and review. The agency first solicited comments on legitimacy criteria for NHSMs used as fuels or ingredients in combustion units in an ANPRM, which was published in the **Federal Register** on January 2, 2009 (74 FR 41). We then published a NHSM proposed rule on June 4, 2010 (75 FR 31844), which the EPA issued in final form on March 21, 2011 (76 FR 15456). The March 2011, NHSM final rule codified the Part 241 standards and procedures for determining if the material is a legitimate non-waste fuel. In October 2011, the agency announced it would be initiating new rulemaking proceedings to revise certain aspects of that final rule. On December 23, 2011, we then published a proposed rule, which addressed specific targeted amendments and clarifications to the part 241 regulations including procedures for comparison of contaminants. These proposed revisions and clarifications were limited to certain issues on which the agency had received new information as well as targeted revisions that the

agency believed were appropriate in order to allow implementation of the rule as the EPA originally intended. As indicated above, the final revisions rule was published in February 2013.

Scientific questions to be addressed and approach:

There are no scientific questions identified as needing to be addressed in advance of or as part of the proposed rule at this time.

Plans for scientific analyses and peer review:

There are no plans at this time for peer review or scientific analyses beyond the normal economic impact analyses.

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

Name of planned action: NHSM – Additions to Categorical Non-Waste Fuels (Non-Hazardous Secondary Material); (2050 AG74)

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.

Recommendation:

This action does not merit further SAB consideration.

EPA Administrator McCarthy signed a proposed rule ³for this planned action on March 24, 2014. The proposal adds the following three non-hazardous secondary materials as an amendment to 40 CFR part 241: 1) debris from construction and demolition; 2) paper recycling residuals; and, 3) creosote-treated railroad ties.

These proposed additions stem from information provided by numerous stakeholders from related industries in response to the February 7, 2013 rule that these should be categorized as non-waste fuels. At that time, EPA acknowledged these as appropriate additions to part 241 in a future rule based on “legitimacy criteria” and as long as certain practices and processes were followed, but also stated that more supporting data were needed regarding creosote-treated railroad ties. The Work Group requested additional information from EPA regarding emissions from burning creosote-treated railroad ties as non-waste fuels. The information provided by EPA satisfied the Work Group’s inquiry. In summary, per the petition process for categorical non-wastes under 40 CFR 241.4(b), EPA compiled information on contaminants in creosote-treated railroad ties by several petitioners and compared contaminant data to information on traditional fuels (e.g., biomass (including wood) and fuel oil) obtained from EPA databases and literature sources. This comparison of contaminants found in creosote-treated railroad ties with traditional fuels resulted in a proposed rule where creosote-treated railroad ties would only be combusted in units designed to burn both biomass and fuel oil.

³ The “Additions to List of Section 241.4 Categorical Non-Waste Fuels Proposed Rule” was published in the Federal Register on April 14, 2014 and is available at: <http://www.gpo.gov/fdsys/pkg/FR-2014-04-14/pdf/2014-07375.pdf>

EPA's Description of the Planned Action

Name of action: Hazardous Waste Export-Import Revisions Rule; (2050-AG77)

EPA Office originating action: OSWER

Brief description of action and statement of need for the action: This action will develop proposed revisions to the hazardous waste export-import related requirements in 40 CFR Parts 262-265 under the Resource Conservation and Recovery Act (RCRA) for the purpose of (1) making existing export and import related requirements in 40 CFR Part 262 Subpart E more consistent with the export and import requirements for transboundary shipments of waste between countries belonging to the Organization for Economic Cooperation and Development (OECD) in the legally binding 2001 OECD Council Decision C(2001)107/FINAL which are reflected in the import-export-transit requirements currently in 40 CFR Part 262 Subpart H; (2) enabling electronic submittal of all export and import-related documents (e.g., export notices, export annual reports); and (3) enabling electronic validation of export shipment data prior to exit.

This proposal, is in part, in response to recommendations made in a report issued by the international Commission for Environmental Cooperation (CEC), entitled, "Hazardous Trade? An Examination of US-generated Spent Lead-acid Battery Exports and Secondary Lead Recycling in Canada, Mexico, and the United States." The CEC report found that, "important gaps remain within Mexico's overall regulatory framework". The CEC also found that EPA does not take adequate measures to ensure that (1) individual U.S. spent lead-acid battery (SLAB) export shipments to Mexico reach their intended destination, and (2) that export shipments of SLABs had been made to 47 countries in 2011 in apparent violation of the existing RCRA notice and consent requirements for hazardous waste exports. Because EPA thinks that the issues raised by the CEC may not be limited to SLAB export shipments, the export/import revisions rule will increase tracking requirements on all individual hazardous waste export shipments to reduce the chance of sham recycling. In addition, establishing advance electronic validation will help ensure that U.S. exporters of hazardous waste have complied with RCRA notice and consent requirements prior to shipments leaving the country. Establishing electronic validation of export shipments is needed to be able to meet EPA's International Trade Data System (ITDS) commitment to have electronic import and export shipment procedures operational by December 31, 2016. EPA is working with the U.S. Customs and Border Protection (CBP) agency and the U.S. Census Bureau (Census) on the development of an advance electronic validation of hazardous waste exports and is organizing a validation pilot to start testing the procedures with no more than 9 volunteer SLAB exporters by June 2014. But changes to the RCRA export/import regulations are needed to provide the legal authority to require advance electronic validation of all hazardous waste export shipments.

There has been significant press attention regarding U.S. exports to Mexico not complying with OECD procedures, but there is no statutory or legal deadline for the rule. However, the ITDS commitment requires final rules related to validation in effect by December 31, 2016, which would require publication of the NPRM no later than April 2015.

Timetable:

Statutory: none

Regulatory Agenda: FR publication: 02/2015

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?":

No. The proposed rule will consist of procedural modifications to existing export and import requirements and does not expand the universe of waste considered to be hazardous by the U.S. or the current universe of hazardous waste exporters, transporters, importers, treatment, storage or disposal facilities receiving imported hazardous waste.

Scientific questions to be addressed and approach: There are no scientific questions identified as needing to be addressed in advance of or as part of the proposed rule at this time.

Plans for scientific analyses and peer review: There are no plans at this time for peer review or scientific analyses beyond the normal economic impact analyses.

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

Name of planned action: Hazardous Waste Export-Import Revisions Rule; (2050-AG77)

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.

Recommendation:

This action does not merit further SAB consideration.

The proposed action consists completely of procedural modifications to existing export and import requirements and does not address issues of hazardous waste contamination specifically. There are no scientific issues to address.

EPA's Description of the Planned Action

Name of action: Development of Best Management Practices for Recreational Boats under Section 312(o) of the Clean Water Act (2040-AF03)

EPA Office originating action: OW

Brief description of action and statement of need:

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 – 2015, Phase 1FR - 2016

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 science supporting the rule does not meet any of the criteria for HISA or ISI.

Scientific questions to be addressed and approach:

Recreational boating activities can contribute to the spread of aquatic nuisance species; consequently, the Agency is considering the development of regulations designed to halt the spread of such organisms. 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, 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 using the best available science and peer reviewed literature to identify appropriate best management practices to develop this action. The Agency is planning to convene an expert workshop on secondary transport 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.

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

Name of planned action: Development of Best Management Practices for Recreational Boats under Section 312(o) of the Clean Water Act (2040-AF03)

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 ⁴
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		

⁴ Two high level reports indirectly related to this planned action are: 1) the National Academy of Sciences (NAS) has published a 2011 report titled "Assessing the Relationship Between Propagule Pressure and Invasion Risk in Ballast Water" (http://www.nap.edu/catalog.php?record_id=13184); and, 2) the SAB conducted an Advisory in 2011 titled "Efficacy of Ballast Water Treatment Systems: a Report by the EPA Science Advisory Board" (<http://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/9e6c799df254393a8525762c004e60ff!OpenDocument>).

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.

Recommendation: The SAB does not find that the development of best management practices for individual boat owners merits further consideration. However, the SAB strongly encourages the EPA to conduct a workshop with appropriate technical expertise to identify the best available science, technology, and management practices to better understand the underlying science and mitigate secondary transportation of invasive species by recreational boats and document the workshop's findings.

Background: This action is for the development of regulations by EPA to implement the 2008 Clean Boating Act (Public Law 110-288). EPA will focus on recreational boating activities that can contribute to the spread of aquatic nuisance species and intends to develop management practices to mitigate adverse impacts on waters of the United States. EPA intends to do so "using the best available science and peer reviewed literature to identify appropriate best management practices" and is "planning to convene an expert workshop on secondary transport via recreational vessels". In the public webinars and listening sessions the EPA conducted in 2010 to support developing the planned action, EPA stated they plan to use a wide range of information to develop the proposed regulation; i.e., input from stakeholders via public meetings, technical information collected by EPA during previous rule making, state generated data/reports, and publications from academia.

Rationale: Aquatic invasive species are major stressors of aquatic ecosystems. In the supporting information provided to the Work Group, the EPA acknowledges the importance of secondary transport of aquatic nuisance species from hull fouling, ballast water, and trailer cleaning. Agency representatives also acknowledge there are many technical and scientific questions associated with addressing this issue and agree that the aquatic nuisance species issue impacts the entire U.S. public.

The National Academy of Sciences (NAS) has published a 2011 report titled "Assessing the Relationship Between Propagule Pressure and Invasion Risk in Ballast Water" and the SAB conducted an Advisory in 2011 titled "Efficacy of Ballast Water Treatment Systems: a Report by the EPA Science Advisory Board." The main objective of the NAS report was to "evaluate the state of the science of various approaches that assess the risk of establishment of aquatic nonindigenous species given certain concentrations of living organisms in ballast water discharges." The NAS report specifically did not focus on "other factors that affect the overall successful establishment of nonindigenous species—such as their interface with a transport vector, such as a ship; vector uptake of specific species; survival of the nonindigenous species during transport events; ballast water treatment to reduce NIS numbers; and release of nonindigenous species from the vector." The SAB report was primarily focused on evaluating technologies to treat ballast water and also did not address secondary transport.

While these two reports focus on management techniques for ballast water - and not secondary transport - both acknowledge that the establishment of non-indigenous species needs to consider the

frequency and number of individuals introduced into suitable environments for propagation. EPA also acknowledges that recreational boats may contribute to the spread of aquatic nuisance species. The Work Group notes that states, regions, localities, and non-profit organizations have developed best management practices for recreational boats and that many of these programs are based on common sense approaches to limiting secondary transport on hulls, trailers, and bilge waters⁵. Some of these programs also contain communications strategies to increase their implementation by individual boat owners.

Agency representatives have informed the SAB Work Group that they are in the planning stages for an expert workshop, and are currently evaluating available resources to conduct a contractor-led review, a virtual workshop, or a face-to-face workshop. However, an agenda, preliminary charge, or potential roster had not been developed at the time of this review.

The Work Group strongly encourages the EPA to conduct a workshop with appropriate technical expertise to identify the best available science, technology, and management practices to better understand the underlying science and mitigate secondary transportation of invasive species by recreational boats and document the workshop's findings. The Work Group also recommends that the charge to the workshop consider the efficacy of best management practices to reduce the frequency and size of nonindigenous populations introduced into environments and communication strategies to increase the implementation of the practices.

The EPA is charged with developing applicable management practices to be used by individuals operating or owning a recreational vessel in this planned action. The Work Group recognizes that the scientific issues surrounding the introduction of invasive species and their subsequent propagation are complex multi-factorial concepts of population ecology and are scientifically and technically important to ecosystems and sustainability. However, the Work Group does not find that the development of best management practices for individual boat owners merits further consideration by the SAB.

⁵Minnesota Department of Natural Resources http://www.dnr.state.mn.us/invasives/preventspread_watercraft.html
and http://protectlakegeorge.com/wp-content/uploads/2012/11/Minnesota-bmp_summary_6_26_12.pdf
Wisconsin Department of Natural Resources: <http://dnr.wi.gov/topic/invasives/bmp.html>
California Department of Fish and Game <http://www.coastal.ca.gov/ccbn/bmp-boaters.pdf>
Connecticut Department of Energy and Environmental Protection:
http://www.ct.gov/deep/cwp/view.asp?a=2696&q=322690&deepNav_GID=1630
The Nature Conservancy Reef Resilience:
http://www.reefresilience.org/Toolkit_Coral/Mgmt_Strategies/MgmtStrategies_Intervention_Invasive.html