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July 30, 2019

SUBMITTED VIA EMAIL

VIA CERTIFIED MAIL (RETURN RECEIPT REQUESTED)

Vincia Holloman
Director of the Environmental Quality Management Division
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RE: Information Quality Act Request for Correction Regarding EPA's 2009 GHG Endangerment Finding

Dear Director Hollman:

In accordance with the Information Quality Act¹ ("IQA"), 114 Stat. 2763, section 515, and the relevant implementing guidelines. Murray Energy Corporation ("Murray Energy") respectfully submits this Request for Correction ("RFC") regarding EPA's 2009 Greenhouse Gas Endangerment Finding² ("Endangerment Finding") and supporting Technical Support Document ("TSD"). For the reasons set forth below, Murray Energy requests that EPA: (1) withdraw the Endangerment Finding and supporting TSD because their development and dissemination failed to meet the requirements of the IQA; (2) cease disseminating and relying on (and advise the public to cease relying on) the Endangerment Finding and TSD until EPA has met all IQA requirements applicable to a "highly influential scientific assessment" ("HISA"); (3) come into compliance with the IQA by subjecting the scientific assessments embodied in the Endangerment Finding and TSD to a HISA-appropriate peer review; and (4) reconsider the scientific assessments embodied in the Endangerment Finding in light of the

¹ Information Quality Act, also known as the "Data Quality Act," as provided under Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554, Dec. 2000). The IQA implemented by the Office of Management and Budget ("OMB") through its Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, OMB (Jan. 3, 2002), and Final Information Quality Bulletin for Peer Review (Dec. 16, 2004).

² Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496 (Dec. 15, 2009).

results of the IQA-compliant peer review and initiate appropriate agency action, including without limitation rescission of the Endangerment Finding.

The IQA directed OMB to issue guidelines for a host of federal agencies — including EPA — to follow in establishing agency-specific guidelines to ensure that information disseminated by that agency is reliable. All covered agencies must provide an administrative mechanism for affected persons to request corrections for information that does not comply with OMB and agency-specific guidelines. EPA has implemented the IQA through the Agency's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Environmental Protection Agency, EPA/260R-02-008 (Oct. 2002) ("EPA Guidelines").³

Recently, OMB directed EPA and other covered federal agencies to update their IQA guidelines pursuant to the Memorandum for the Heads of Executive Departments and Agencies: Improving Implementation of the Information Quality Act, M-19-15 (Apr. 24, 2019). OMB's memorandum requires that EPA "will not take more than 120 days to respond to an RFC without the concurrence of the party that requested the request for correction." *Id.* at 10. EPA's response must now "contain a point-by-point response to any data quality arguments contained in the RFC and should refer to a peer review that directly considered the issue being raised, if available." *Id.* The revisions mandated in OMB's memorandum were to take effect on July 23, 2019. *See Id.* at 2 ("This Memorandum directs agencies to update their guidelines within 90 days").

Murray Energy submits this RFC in accordance with EPA's Guidelines and OMB's April 24, 2019 memorandum. *See* Section 8 - Administrative Mechanism for Correction of Information, pg. 30. The EPA Guidelines state that an RFC should include the following:

- The name and contact information of the affected person submitting a complaint, and the identification of the individual to serve as a contact;
- A description of the information the person believes does not comply with EPA or OMB guidelines, including specific citations to the information and to EPA OMB guidelines if applicable;
- An explanation of how the information does not comply with EPA or OMB guidelines and recommendation of corrective action; and
- An explanation of how the alleged error affects or how a correction would benefit the requester.

Id. at Section 8.2.

Michael O. McKown shall serve as Murray Energy's point of contact with regard to this RFC.⁴ The

³ EPA Guidelines are further implemented through: (1) Action Development Process: Guidance for EPA Staff on Developing Quality Actions, Office of Policy, Economics, and Innovation Regulatory Development Series, EPA (June 30, 2004); (2) Peer Review and Peer Involvement at the U.S. Environmental Protection Agency, EPA's Peer Review Policy, EPA Administrator (Jan. 31, 2006); (3) U.S. Environmental Protection Agency Peer Review Handbook, 3rd Edition, EPA/100/B-06/002, Science Policy Council, EPA (2006); and (4) Assessment Factors: A Summary of General Assessment Factors for Evaluating the Quality of Scientific and Technical Information, EPA 100/B-03/001, Science Policy Council, EPA (June 2003).

⁴ Mr. McKown can be reached at:
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information that EPA failed to evaluate and disseminate in accordance with the IQA, as well as how EPA failed to comply with the IQA, is described below in Section B. An explanation of how EPA's error has affected Murray Energy and how a correction would benefit Murray Energy is presented below in Section C. Finally, Murray Energy's recommendation for corrective action is presented below in Section D.

A. Overview of Murray Energy

Murray Energy is the largest underground coal mining company in the United States. Murray Energy is also the country's largest employer of coal workers in the underground mining industry, with over 6,000 employees. Murray Energy and its subsidiary companies currently operate 18 active coal mines, located in Ohio, Illinois, Kentucky, Utah, Alabama, and West Virginia.

Murray Energy produces approximately 76 million tons of bituminous coal each year that it supplies to many of the largest coal-fired electric utility generating facilities in the United States. Murray energy, together with its majority interest in Foresight Energy LP, holds over 4 billion tons of proven and probable coal reserves, which is enough coal to provide reliable electricity to millions of Americans for generations to come. Murray Energy is also engaged in related business operations and activities, including owning and operating four mining equipment manufacturing and rebuild facilities along with a number of river, truck and rail terminals, and 25 river towboats and over 500 coal barges on the inland waterway system.

For more than nine years, Murray Energy spearheaded the United States coal industry's efforts to protect the industry from the destruction wrought by the Obama Administration's illegal and ill-conceived greenhouse gas regulatory agenda, which started with the Endangerment Finding and culminated in the Clean Power Plan ("CPP"). The Endangerment Finding and TSD contain the information, data, studies, and conclusions that provide the legal and factual justification for a series of regulations that unreasonably burden myriad industries that rely upon fossil fuels, including the so-called Tailpipe Rule, the Tailoring Rule and the CPP. No company is better positioned to understand how the absence of adequate peer review during formulation of the Endangering Finding has negatively impacted thousands of hard-working men and women who depend on the coal industry for their livelihoods and, at the same time, jeopardized America's economic and energy security.

B. *The Endangerment Assessment and TSD are fatally flawed by EPA's undisputed failure to perform the unbiased, transparent peer review required under the IQA for such highly influential scientific assessments.*

1. *The Endangerment Finding and TSD embody a highly influential scientific assessment.*

The Endangerment Finding and TSD trigger these requirements because they embody a "scientific assessment" that also qualifies as "highly influential." The definition of the term "scientific assessment" is straightforward and easily applied. "Scientific assessment" means "an evaluation of the body of science or technical knowledge, which typically synthesizes multiple factual inputs, data, models, assumptions, and/or applies best professional judgment to bridge uncertainties in the available information."⁵ The Endangerment

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⁵ Final Information Quality Bulletin for Peer Review, 70 Fed. Reg. 2664, 2666 & 2671 ("OMB Bulletin").

Finding is explicitly based upon EPA's review of available scientific information, leading to its conclusion that greenhouse gases endanger the public health and welfare of current and future generations. EPA had to weigh the conclusions and information published by organizations like the Intergovernmental Panel on Climate Change ("IPCC") in deciding which information to present — and which information to exclude — in the TSD. The Endangerment Finding, therefore, purports to encapsulate the body of science and technical knowledge associated with climate change by synthesizing information from voluminous and numerous sources "to bridge uncertainties in the available information."

There is no credible basis for concluding that the Endangerment Finding and TSD do not embody a scientific assessment for purposes of compliance with the IQA. As the U.S. Court of Appeals for the District of Columbia Circuit observed, the material presented in the TSD represented the "evidence" that EPA actively weighed and ultimately relied upon to fulfill its legal mandate in the Endangerment Finding:

Moreover, it appears from the record that EPA used the assessment reports not as substitutes for its own judgment but as evidence upon which it relied to make that judgment. EPA evaluated the processes used to develop the various assessment reports, reviewed their contents, and considered the depth of the scientific consensus the reports represented. Based on these evaluations, EPA determined the assessments represented the best source material to use in deciding whether greenhouse gas emissions may be reasonably anticipated to endanger public health or welfare. Endangerment Finding, 74 Fed. Reg. at 66,510–11. It then reviewed those reports along with comments relevant to the scientific considerations involved to determine whether the evidence warranted an endangerment finding for greenhouse gases as it was required to do under the Supreme Court's mandate in *Massachusetts v. EPA*.

Coalition for Responsible Regulation, Inc. v. EPA, 684 F.3d 102, 120 (D.C. Cir. 2012).

Indeed, EPA's disingenuous claim that the Endangerment Finding and TSD do not embody a scientific assessment suggests that the Agency issued the finding that formed the legal and factual basis for greenhouse gas regulations imposing billions of dollars in compliance costs without conducting a scientific assessment. If true, the Endangerment Finding was not based on science, but was issued in spite of science using a result-driven approach designed to exclude contrary information. To make matters worse, EPA attempted to hide this information by refusing to allow public participation in the peer review process.

Moreover, the Endangerment Finding and TSD plainly qualify as a "highly influential" scientific assessment. An assessment is "highly influential" if it (1) "could have a potential impact of more than \$500 million in any one year on either the public or private sector," or (2) that the dissemination is novel, controversial, or precedent-setting or has significant interagency interest." OMB Bulletin at 70 Fed. Reg. 2664, 2671. In this case, both criteria were easily satisfied. First, the Endangerment Finding directly triggered EPA's promulgation of greenhouse gas standards for mobile sources under the so-called Tailpipe Rule, greenhouse gas emission standards for major stationary undergoing construction or modification under the so-called "Tailoring Rule," and its attempted reconfiguration of the entire American power system under the CPP. EPA should have therefore recognized that the Endangerment Finding could have a potential impact on the regulated industries and the economy far exceeding \$500 million per year. Second, it is difficult to imagine a more novel, controversial or precedent-setting finding than one that concludes that carbon dioxide — exhaled by every human and animal, and essential to the growth of plant life — endangers public health and welfare.

Because of the highly influential nature of the Endangerment Finding and TSD, OMB and EPA guidelines implementing the IQA mandate that EPA should have applied the highest standard of peer review to ensure that the quality of information disseminated in the Endangerment Finding was independently verified by

the Agency. It is undisputed that EPA failed to do so, even after EPA's own Inspector General made the error known to EPA.

2. *Murray Energy joins the analysis presented by the Competitive Enterprise Institute in its May 13, 2019 RFC.*

Before relying upon and disseminating a HISA, EPA must adhere to the peer-review requirements found in Section III of the OMB Guidelines, EPA's Peer Review Policy and Peer Review Handbook. The peer review process is designed to ensure that the peer reviewers are fair and balanced, independent, and that no conflicts of interest exist. These provisions also ensure the review process is transparent, provides citizens access to the data used to support the HISA, and affords the public the opportunities for public participation. As EPA's own Inspector General determined, EPA's process failed to meet these standards.

EPA abdicated its responsibility to ensure that the underlying data used to support the Endangerment Finding was properly peer reviewed, in violation of the IQA, by inappropriately assuming that other organizations had already performed compliant peer reviews. The Endangerment Finding, however, is based on EPA's assessment of information primarily provided by the U.S. Global Change Research Program ("USGCRP"), the IPCC, and the National Research Council ("NRC") which is part of the National Academies. However, under OMB Guidelines, information from the National Academies can be excluded from the HISA peer-review requirements found in Section III. *See* OMB Bulletin, Section IV (alternative external peer-review procedure for HISA); *see also* Office of Inspector General's Procedural Review of EPA's Greenhouse Gases Endangerment Finding Data Quality Processes, Rpt. No. 11-P-0702, at 14 (Sept. 26, 2011) ("examples of listed acceptable alternative procedures include relying on scientific information produced by the NAS . . .") ("Inspector General's Report"). EPA was, however, required to independently confirm that the IPCC and USGCRP studies relied upon in the TSD were properly peer reviewed.

On May 13, 2019, the Competitive Enterprise Institute ("CEI") submitted an RFC to EPA pursuant to the IQA, as implemented through EPA and OMB guidelines, regarding the Endangerment Finding and supporting TSD. *See* Attachment 1. CEI's RFC and this RFC are supported by the 2011 Inspector General's Report in which the Inspector General concluded that "EPA's TSD peer review methodology did not meet the OMB requirements for [HISA]." *Id.* at 13. The Inspector General found that EPA failed to make the threshold determination of whether the Endangerment Finding was a HISA, or was merely influential scientific information. *Id.* The Inspector General's Report can be read to infer that the peer reviewers were not fair and balanced because the "panel was made up of 12 federal climate change scientists" and that the peer reviewers were not independent because one of them "was an EPA employee." *Id.* The Inspector General also found that the peer review panel's "findings and EPA's disposition of the findings were not made available to the public as would be required for reviews of [HISA]." *Id.* Moreover, EPA failed "certify that the supporting technical information was peer reviewed in accordance with EPA's peer review policy" and that EPA neglected to "prepare a complete analytic blueprint outlining its approach for reviewing the technical data needed to support its action . . ." *Id.*

The Inspector General listed five "deviations" of EPA's Action Development Process, which included: (1) not having a workgroup meeting to discuss the options and policies to be considerate at the October 29, 2009, options selection meeting; (2) reducing the time to review options sections meeting materials; (3) not including all reviewing offices' positions in the options selection meeting materials; (4) not documenting the options selection meeting decision; and (5) not providing a complete final Agency review package to the Assistant Administrators/Regional Administrators, workgroup members, and Regulatory Steering Committee representatives/regional regulatory contacts prior to the final Agency review meeting. *Id.* at 21.

CEI raised eight (8) specific violations associated with the information used by EPA to issue the Endangerment Finding and TSD in violation of the IQA and relevant guidelines:

1. EPA did not consider allowing the public, including scientific and professional societies, to nominate potential reviewers participate in EPA's peer review process;
2. EPA's peer review panel that a substantial conflict of interest because it was larger view in its own work;
3. EPA's peer review panel is not sufficiently independent as it contained an EPA employee;
4. The public was not allowed to participate in the peer review process as required by OMB;
5. EPA's peer review panel did not prepare a Review Report as required by OMB;
6. EPA failed to certify how it complied with the IQA;
7. EPA failed to state how the underlying information used to support the Endangerment Finding met the requirements of OMB; and
8. EPA's use of the IPCC peer review is not adequate to satisfy OMB guidelines on conflict of interest requirements.

Attachment 1 at pp. 3-6.

Murray Energy joins and adopts in full CEI's description and explanation of the violations discussed above that do not comply with EPA or OMB guidelines in violation of the IQA, as well as the failures identified by the Inspector General. In accordance with EPA's requirement that RFCs contain a description and explanation of how the challenged information does not comply with EPA or OMB guidelines, Murray Energy hereby incorporates in this RFC, and therefore will not to reiterate in further detail, the violations identified by CEI.

C. EPA's 2009 Endangerment Finding has harmed, and continues to harm, Murray Energy, the United States coal industry, and jeopardized America's energy security based on biased information that EPA failed to adequately peer review as required by OMB and the IQA.

Murray energy has a vital interest in the accuracy and quality of the information used and disseminated by EPA related to greenhouse gas emissions that allegedly contribute to global climate change. Murray Energy and its employees are dependent on the continuing viability and operation of coal-fired electricity generation in the United States. The Endangerment Finding and the subsequent anti-fossil fuel regulations legally premised on that agency action triggered the United States' unprecedented flight from coal-generated power, thereby jeopardizing our Nation's energy security.

The excessive and unjustified fossil fuel limitations spawned by the Endangerment Finding have contributed to the early retirement of well over 500 coal-fired generating plants, representing 59 gigawatts ("GW") of generating capacity through 2016. An additional 1 GW of coal-fired generation will be closed by the end of 2020, bringing coal's share of United States electricity production to as low as 27%. These closures are the functional equivalent of entirely eliminating the combined electricity supplies of Ohio, Pennsylvania, Indiana, and West Virginia.

In the PJM Regional Transmission Organization alone, which covers all or part of 13 states and 65 million people, 11 GW of coal-fired electricity generation was closed over the past four years, and an additional 20 GW of baseload capacity in the PJM is contemplated for closure. The geographic concentration of these impacts has disproportionately impacted Murray Energy's business.

This devastation has had, and will continue to have, sweeping consequences for the United States. By early 2016, the total value of the American coal industry had declined over a period of five years from \$68.8 billion to \$4.08 billion, a 94% reduction in value. Fifty-two coal companies experienced bankruptcy proceedings, with only four major companies remaining financially solvent. This massive shift imposes unnecessary costs on the power sector that ultimately land on the shoulders of American consumers.

EPA's "War on Coal" has had far-reaching consequences beyond the coal industry. Rural communities in coal producing regions and areas that depend on employment in coal-fired power plants or mining operations are losing millions of dollars in local tax support due to early coal-plant retirement, mine closure and associated job loss. This devastates communities by depriving local businesses, governments, and school districts of the revenues they need to survive.

Moreover, the loss of coal-fired baseload capacity has significantly harmed the resiliency and reliability of America's energy system thereby jeopardizing our Nation's energy security. American citizens are now more susceptible to power outages during extreme weather events than ever before due to overreliance on energy produced from renewables, such as wind and solar, and natural gas. Wind and solar generation contribute nothing to grid resiliency nor grid reliability, because operators cannot increase generation on demand balance load or replace capacity when other plants incur forced outages. Therefore, renewables do not generate enough electricity during extreme weather events to meet America's energy needs.

Replacing coal plants with new gas-fired facilities, or converting coal plants to natural gas, is not the answer, because gas-fired power plants have limited or no storage capacity. Most natural gas plants rely upon "just in time" pipeline delivery systems. These facilities receive gas pursuant to firm gas transportation contracts with natural gas pipelines companies. Coal plants, on the other hand, typically maintain more than 50 days of average burn on-site that can be used when needed. Firm transportation contracts do not provide the same level of reliability as on-site storage because natural gas pipeline operators by law must provide homeowners with natural gas before they provide gas to power plants. During extreme weather events, when demand is highest, natural gas plants are subject to gas supply interruptions because there is not enough natural gas capacity to meet demand.

There is no better illustration of the need to preserve coal-fired baseload generation than the so-called "bomb cyclone" that immersed the eastern United States in extremely cold, windy conditions from December 27, 2017 through January 8, 2018. At least two million Americans lost their power and 22 tragically lost their lives. Without the electricity provided by coal-fired power plants, the devastation of this very short twelve-day event would have been far worse.

The United States Department of Energy's National Energy Technology Laboratory issued a report ("NETL Study") analyzing the reliability and resiliency of different sources of electricity generation during the 2017-18 bomb cyclone. The NETL Study confirmed that coal was the single most reliable and resilient form of electricity production during that critical time. Coal and nuclear power provided 89% of the electricity during the bomb cyclone. During this time, coal-fired generation averaged an output level of 46 GW, over 50% greater than the average of 29.8 GW in normal conditions. Indeed, if it were not for the electricity generated by coal-fired power plants, with ample capacity and on-site fuel availability, the power grids would have experienced a

massive 9 to 18 GW shortfall, leading to system collapse.

During this extreme cold snap, coal far outperformed all other fuel sources, particularly natural gas and renewables. At least 37,000 MW of supposedly available natural gas-powered electricity was entirely unavailable due to the priority for home heating use and frozen natural gas pipelines. The ISO New England regional transmission organization confirmed that their region is at major risk of future fuel insecurity due to New England's retirement of coal and nuclear generating capacity and its resulting dependence on natural gas power that relies on "just in time" pipeline delivery.

Revisiting the scientific validity of the information upon which the Endangerment Finding was explicitly based will serve as a critical step in reversing the Nation's unjustified flight from coal and other fossil fuels. Murray Energy is confident that a transparent, balanced and unbiased scientific assessment of *all* relevant information will lead to the conclusion that the use of such fuels does not endanger public health or welfare, particularly in light of the many demonstrable harms that have arisen and will continue to arise from abandoning such fuels.

D. EPA must withdraw the Endangerment Finding, conduct appropriate peer review of the relevant scientific literature, and then revisit the basis for the Endangerment Finding in light of that proper review.

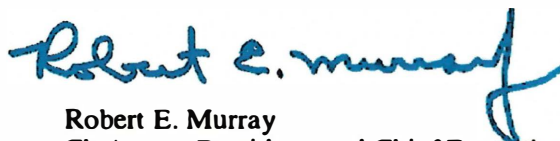
As detailed in Section B above, EPA utterly failed to properly apply relevant OMB Information Quality standards and EPA Guidelines, in violation of the IQA. Consequently, EPA abdicated its core responsibility to make sure that the reliability of the information used and disseminated in support of the highly influential Endangerment Finding was independently verified through a proper peer review process. Based on the aforementioned deficiencies, Murray Energy respectfully requests that EPA promptly withdraw its Endangerment Finding and supporting TSD. The Agency should cease disseminating and relying on (and advise the public to cease relying on) the Endangerment Finding and TSD until EPA has made a determination that complies with the IQA. EPA should then come into compliance with the IQA by subjecting the scientific assessments embodied in the Endangerment Finding and TSD to a HISA-appropriate peer review and reconsider the validity of the Endangerment Finding in light of that review. To the extent that such review casts doubt on the validity of the Endangerment Assessment, as Murray Energy strongly believes any balanced and unbiased peer review will, EPA should initiate appropriate agency action, including without limitation rescission of the Endangerment Finding.

CONCLUSION

On behalf of Murray Energy, and its ownership, management, and employees, we respectfully submit this Request for Correction.

Sincerely,

MURRAY ENERGY CORPORATION



Robert E. Murray
Chairman, President, and Chief Executive Officer

ATTACHMENT 1

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May 13, 2019

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**Re: Information Quality Act Correction Request Regarding EPA's 2009 GHG
Endangerment Finding**

The Competitive Enterprise Institute (CEI) submits this request for correction under the Information Quality Act (IQA), 114 Stat. 2763, section 515, as implemented through EPA and Office of Management and Budget (OMB) guidelines. These guidelines were expanded by OMB in a [memorandum](#) issued on April 24, 2019.

Under OMB's new requirements, **"agencies will not take more than 120 days to respond to an RFC without the concurrence of the party that requested the request for correction."** For this reason, we expect a response to this request for correction (RFC) within 120 days. In addition, the new OMB guidelines require that, "The agency response should contain a point-by-point response to any data quality arguments contained in the RFC and should refer to a peer review that directly considered the issue being raised, if available." Furthermore, "Agencies should share draft responses to RFCs and appeals with OMB prior to release to the requestor for assessment of compliance with the above norms." Thus, responses to correction requests now need to be reviewed in advance by OMB sufficiently in advance of the 120-day deadline.

We ask EPA to determine that its 2009 GHG Endangerment Finding and supporting Technical Support Document (TSD) do not meet the requirements of the Information Quality Act. As discussed at the end of this document, EPA's Inspector General found many of these deficiencies in a 2011 report to the agency. EPA's response to those findings was inadequate, and those inadequacies are even more obvious in light of OMB's latest guidelines.

Despite this, the 2009 GHG Endangerment Finding and TSD are still being distributed and relied upon by EPA and as such are subject to correction requests under the IQA. *See, e.g.,* <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-clean-air-act>. For the reasons described below, the deficiencies should be corrected,

and EPA should cease distributing its Endangerment Finding and TSD until they have gone through the proper peer review process.

The 2009 GHG Endangerment Finding Is a Highly Influential Scientific Assessment

When EPA issued its 2009 GHG Endangerment Finding, it failed to explain whether it or the accompanying the TSD were “highly influential scientific assessments” (HISA) or whether instead they merely contained “influential scientific information”. As is shown below, both documents are properly viewed as HISAs. This triggers a number of Information Quality requirements that EPA failed to follow.

The 2009 GHG Endangerment Finding is a scientific assessment.

In the 2009 Endangerment Finding and TSD, EPA evaluated the current state of the science in making its determination; for this reason, these documents are clearly scientific assessments. According to OMB’s [*Final Information Quality Bulletin for Peer Review*](#), 70 FR 2664 (2005), (“OMB 2005 Final Memo”), “The term ‘scientific assessment’ means an evaluation of a body of scientific or technical knowledge, which typically synthesizes multiple factual inputs, data, models, assumptions, and/ or applies best professional judgment to bridge uncertainties in the available information. These assessments include, but are not limited to, **state-of-science reports**; ... weight of-evidence analyses; meta-analyses; health, safety, or ecological risk assessments.” *Id.* at 2666 (emphasis added).

This characterization of the Endangerment Finding and TSD was ironically supported by EPA itself; in 2010, it stated that it “did not passively and uncritically accept a scientific judgment or conclusion supplied to it by outsiders.” [*EPA’s Response to the Petitions to Reconsider the Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202\(a\) of the Clean Air Act*](#), 75 FR 49555, 49581 (2010). Instead, it admitted that it “evaluated all of the scientific information before it, determined the current state of the science on greenhouse gases ... and the degree of scientific consensus on this science.” *Id.* In short, EPA produced a report on the “state of the science on greenhouse gases”, and such “state-of-science reports” are scientific assessments and must comply with the OMB rules for such assessments.

The 2009 GHG Endangerment Finding has been highly influential.

The OMB 2005 Final Memo defines a “highly influential scientific assessment” (HISA) as those scientific assessments which “(i) Could have a potential impact of more than \$500 million in any year, or (ii) Is novel, controversial, or precedent-setting or has significant interagency interest.” 70 FR 2671.

Many of the regulations issued based on the 2009 GHG Endangerment Finding had more than a \$500 million potential impact and as such it must be considered a HISA. To take but one instance, the “Clean Power” Plan, based on the 2009 GHG Endangerment Finding, was estimated by EPA to cost \$2.5 billion in compliance costs in 2020, \$3.0 billion in 2025, and \$8.4 billion in 2030. The Clean Power Plan relied upon the 2009 GHG Endangerment Finding.

Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 FR 64661, 64679 (2015). These costs far exceed the \$500 million threshold for a HISA. In the Medium/Heavy Duty GHG Emission rules, EPA estimated it would cost \$6.5 billion in Vehicle Program Costs in 2040 and \$7.5 billion in 2050 (both using 2013 dollars). Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles-Phase 2, 81 FR 73478, 73482 (2016). The Light-Duty car emission costs are no better. EPA estimated \$2 billion in annual technology costs for cars in 2017 (in 2010 dollars). 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 FR 62623, 62920 (2012). Those costs increase to \$27 billion in 2050 (undiscounted 2010 dollars). *Id.* Many other similar regulatory actions relying upon the Endangerment Finding have costs exceeding \$500 million.

The 2009 GHG Endangerment Finding was also novel, controversial, and precedent-setting; as such, it is a HISA on that basis as well. That there have been more than a dozen petitions for reconsideration by various organizations shows how controversial this decision was and continues to be. 75 FR 49555 (denial of ten petitions in 2010); <https://bit.ly/2PYW7ed> (pending petition of the Competitive Enterprise Institute and the Science and Environmental Policy Project); <https://bit.ly/2HbAiFz> (pending petition of the Concerned Household Electricity Consumers Council); <https://bit.ly/2PWrf16> (pending petition of the Texas Public Policy Foundation). As to its novel nature, never before had EPA issued an Endangerment Finding under the Clean Air Act for a greenhouse gas. And as to its precedent-setting nature, EPA used the 2009 GHG Endangerment Finding as precedent in its 2015 point source assessment of electric generating units. 80 FR 64509, 64517. The inter-agency interests are also massive, given the duty of NHTSA and other agencies to regulate in other areas involving GHGs, such as CAFE.

EPA's failure to properly apply OMB Information Quality standards led to a variety of problems with the peer review process, all in violation of the IQA. These violations include:

- 1) **EPA did not consider allowing the public, including scientific and professional societies, to nominate potential reviewers.** Per Section III, part 3(a), of OMB 2005 Final Memo, "Agencies shall consider requesting that the public, including scientific and professional societies, nominate potential reviewers." 70 FR 2675. That was not done by EPA for the 2009 Endangerment Finding. The EPA Inspector General report, discussed below on pages 6-7, stated that "the Agency did not consider asking the public to nominate reviewers." But EPA utilized an entirely internal process with no consideration given to outside nomination of peer reviewers.

The OMB 2005 Final Memo requires that, "The group of reviewers shall be sufficiently broad and diverse to fairly represent the relevant scientific and technical perspectives and fields of knowledge." However, with respect to the Endangerment Finding, all of the peer reviewers were federal employees rather than a "broad and diverse" group. No member of the public, including any private sector scientist, engineer or other profession, was on

the peer review panel. This is the likely result of a process that excludes such individuals in the selection of who the peer reviewers are, as occurred here.

- 2) **The peer review panel had a substantial conflict of interest because it was largely reviewing its own work.** Under Section III, part 3(b), of the OMB 2005 Final Memo, the agency is responsible for making sure the peer review panel has no conflicts of interest in evaluating the material it reviews. 70 FR 2676. But for the 2009 Endangerment Finding, the individuals selected for the peer review panel by EPA had leading roles in developing the assessment reports cited in that document. For instance, Susan Solomon was the Co-Chair of the IPCC AR4 Working Group I relied upon by EPA. Another example is Virginia Burkett, who both was an author on IPCC AR4 WGII and the USGCRP report relied upon by the 2009 Endangerment Finding TSD. They were effectively asked to judge their own work.

This approach is contrary to EPA's own procedures at the time. "Since it would probably result in a perceived, if not real, conflict of interest, the group that is generating the work product usually cannot conduct or perform the peer review of its own work product." EPA, Agency Peer Review Handbook, 3rd Edition, pg. 37, <https://bit.ly/2W3oTQF> (a newer version of the report was issued in 2015, but the 3rd edition was used at the time). The handbook notes that a conflict of interest exists "when their professional standing and status or the significance of their principal area of work might be affected by the outcome of the peer review." *Id.* at 64. Likewise, the National Academy of Sciences' policy on conflict of interests notes "an individual should not serve as a member of a committee with respect to an activity in which a critical review and evaluation of the individual's own work, or that of his or her immediate employer, is the central purpose of the activity, because that would constitute a conflict of interest." National Academy of Sciences, Conflict of Interest Policy, <http://www.nationalacademies.org/coin/>. The relationship between the peer reviewers and the authorities that the 2009 Endangerment Finding claimed to "most heavily rely upon" are shown in Attachment A.

- 3) **The peer review panel was not sufficiently independent as it contained an EPA employee.** Under Section III, part 3(c), of the OMB 2005 Final Memo, "the agency—or entity selecting the reviewers—shall bar participation of scientists employed by the sponsoring agency unless the reviewer is employed only for the purpose of conducting the peer review (i.e., special government employees)." 70 FR 2676. One of the 12 peer reviewers for the 2009 GHG Endangerment Finding was an employee of EPA and was not hired just for peer review, which clearly violates this requirement.
- 4) **The public was not allowed to participate in the peer review process.** Under Section III, part 5, of the OMB 2005 Final Memo:

Whenever feasible and appropriate, the agency shall make the draft scientific assessment available to the public for comment at the same time it is submitted for peer review (or during the peer review process) and sponsor a public meeting

where oral presentations on scientific issues can be made to the peer reviewers by interested members of the public. When employing a public comment process as part of the peer review, the agency shall, whenever practical, provide peer reviewers with access to public comments that address significant scientific or technical issues.

70 FR 2676.

This simply was not done by EPA. EPA never allowed the public to participate in the peer review process. EPA did not allow the draft scientific assessment to be available to the public when it was submitted for peer review. EPA did not sponsor a public meeting or make public comments on the draft available to the peer reviewers. It didn't even try to comply with the OMB guidelines in this area.

In fact, the peer review panel's questions and responses have never been made public. This is despite the OMB 2005 Final Memo, which states: "When peer review of government reports is considered, the case for transparency is stronger, particularly when the report addresses an issue with significant ramifications for the public and private sectors." 70 FR 2670.

- 5) **No Peer Review Report was prepared.** The OMB 2005 Final Memo states "Section III(6) requires that agencies instruct reviewers to prepare a peer review report that describes the nature and scope of their review and their findings and conclusions." 70 FR 2672. No peer review report was done, nor was the panel instructed to create such a report by EPA, as required to do by OMB guidelines.
- 6) **EPA failed to certify how it was complying with the IQA.** Section VII of the OMB 2005 Final Memo requires an agency to include in the administrative record a certification explaining how the agency complied with the OMB IQA peer review requirements. 70 FR 2673. EPA failed to do so, and as such did not provide an opportunity for the public to comment on whether the method used by the agency was sufficient.
- 7) **EPA did not state how the underlying information supporting the Endangerment Finding met the requirements of the OMB Information Quality Bulletin for Peer Review.** Under the OMB 2005 Final Memo, and as emphasized in the OMB guidelines issued on April 24, 2019, "When using scientific information, including third-party data or models, to support their policies, agencies must ensure compliance with the requirements of OMB's Information Quality Bulletin for Peer Review." EPA failed to explain why the use of the data and models of the IPCC, NRC, and USGCRP meet the requirements of the OMB Information Quality Bulletin. EPA just assumed that its peer review procedures are adequate, while the guidelines only presume that NAS peer review procedures are adequate.
- 8) **IPCC peer review is not adequate to satisfy OMB guidelines on conflict of interest requirements to be used.** As noted above, the new OMB guidelines require that "When

using scientific information, including third-party data or models, to support their policies, agencies must ensure compliance with the requirements of OMB's Information Quality Bulletin for Peer Review." The OMB 2005 Final Memo, in Section II part (3)(b), on conflicts of interest require that "in selecting peer reviewers who are not government employees, adopt or adapt the National Academy of Sciences policy for committee selection with respect to evaluating the potential for conflicts."

The National Academy of Sciences policy for committee selection requires that: at the time of appointment, each committee member is required to list all professional, consulting, and financial connections, as well as to describe pertinent intellectual positions and public statements by filling out a confidential form, 'Background Information and Confidential Conflict of Interest Disclosure.' The committee appointment is not finalized until the institution completes a review of information regarding potential conflicts of interest and bias.

National Academies, Getting to Know the Committee Process, pg. 6, https://sites.nationalacademies.org/cs/groups/dbasse/site/documents/webpage/dbasse_086051.pdf.

No such information or form is required from members of the IPCC peer review committees. As such, the IPCC does not meet the OMB requirements for peer review selection for conflicts of interest and cannot be directly relied upon under the IQA as EPA did in this case. When questioned about this by the IG, EPA admitted that "IPCC procedures do not explicitly contain 'conflict of interest' language." IG Report pg. 70. While EPA said it was not aware of any conflicts of interest affecting the quality of IPCC reports, the OMB requirements ensure such problems do not occur in the first place by requiring the safeguards used by the National Academy of Sciences. As there is not appropriate conflict of interest protection in the IPCC procedures, under the OMB guidelines, an EPA peer review panel would have to evaluate the scientific basis of IPCC's conclusions.

The failures by EPA to do a proper peer review as required by the OMB and EPA guidelines for the 2009 GHG Endangerment Finding undermine the quality of the information disseminated by EPA.

EPA's Inspector General Concluded EPA Failed to Follow IQA Guidelines

Less than two years after EPA issued its Endangerment Finding, the EPA Inspector General did an independent evaluation of whether EPA properly followed OMB peer review guidelines. He found that EPA had failed to do so. According to the Inspector General: "We interpreted OMB's guidance to indicate that the TSD was a highly influential scientific assessment. EPA's peer review did not meet all OMB requirements for such documents." [*Procedural Review of EPA's Greenhouse Gases Endangerment Finding Data Quality Processes*](#), Report No. 11-P-0702, pg. 13 (September 26, 2011). The EPA Inspector General found, among others, that:

- As to OMB requirements for peer reviewers with “broad and diverse” views, the IG noted that “all were federal employees and all had leading roles in developing the assessment reports cited in the TSD.” IG Report pg. 67.
- An EPA employee was on the peer review panel, which is an explicit violation of the OMB requirements.
- “[P]ublic opportunity to comment on a document is not public participation in the peer review” (IG Report pg. 68) and the failure of EPA to provide public input into the peer review process violates OMB requirements.
- There was no peer review report, contrary to OMB requirements. IG Report pg. 69.
- The EPA process did not even meet the requirements of an influential scientific information due to the lack of a peer review record, peer review report, EPA response to peer reviewers, and approval of such a response. IG Report pg. 83.

Despite the IG’s documentation of these and other errors, EPA refused to correct them. It claimed the 2009 Endangerment Finding was not a scientific assessment on the dubious ground that it relied entirely upon the conclusions made by the IPCC and other outside sources. But even if such state-of-science reports rely on outside sources, they are still considered scientific assessments by OMB. This is because of the judgment that EPA must exercise in its use of them; it must decide which outside sources to rely upon, and how much weight to give to each of those sources.

It is time that EPA correct the Information Quality Act errors that the Inspector General identified.

EPA Should Stop Disseminating the Endangerment Finding Until a Valid Peer Review Process Is Completed

The Information Quality Act guidelines require an agency to follow the proper peer review process before a scientific assessment can be disseminated. No valid peer review process was done for the 2009 GHG Endangerment Finding. Until such a peer review process is validly completed, under the OMB guidelines, EPA should stop disseminating this scientific assessment.

Given the failure of that finding to be properly peer-reviewed, the only way for EPA to disseminate it is with the disclaimer “This information is distributed solely for the purpose of pre-dissemination peer review under applicable information quality guidelines. It has not been formally disseminated by [the agency]. It does not represent and should not be construed to represent any agency determination or policy.” OMB Final Guidelines, Section I, Part 3, 70 FR 2674. This disclaimer obviously would not be appropriate to the current 2009 GHG Endangerment Finding, and, as such, dissemination should end.

EPA should then restart the process of peer reviewing the 2009 GHG Endangerment Finding. Lastly, EPA will have to reconsider the findings of the 2009 GHG in light of this new peer review process, taking into account objections and problems raised by the peer reviewers and the public.

By withdrawing the Endangerment Finding and then restarting the peer review process for it, EPA can ensure that there is confidence in the quality of the information being disseminated.

Sincerely,

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Attachment A

Attachment A: Relationship of Peer Reviewers to References Upon Which EPA Relied Most Heavily for its 2009 Endangerment Finding

Virginia Burkett	<p>Author of IPCC AR4 WGII</p> <p>Reviewer of NRC Potential Impacts of Climate Change on U.S. Transportation (2008)</p> <p>Author of USGCRP Global Climate Change Impacts in the United States (2009)</p> <p>Author of CCSP SAP 2.1: Scenarios of GHG Emissions and Atmospheric Concentrations (2007)</p> <p>Author of CCSP SAP 3.1: Climate Change Models (2008)</p> <p>Author of CCSP SAP 4.1: Coastal Sensitivity to Sea Level Rise (2009)</p> <p>Lead Author of SAP 4.7: Impacts of Climate Change and Variability on Transportation Systems (2008)</p>
William Emanuel	Reviewer of IPCC AR4 WGII
Anthony Janetos;	<p>Lead Author of IPCC AR4 WGII</p> <p>Author of NRC Potential Impacts of Climate Change on U.S. Transportation (2008)</p> <p>Author of USGCRP Global Climate Change Impacts in the United States (2009)</p> <p>Provided guidance and support for CCSP SAP 4.2: Thresholds of Change in Ecosystems (2009)</p> <p>Lead Author of CCSP SAP 4.3: Agriculture, Land Resources, Water Resources, and Biodiversity (2008)</p> <p>Reviewer for CCSP SAP 4.7: Impacts of Climate Change and Variability on Transportation Systems (2008)</p>
Thomas Karl;	<p>Reviewer of IPCC AR4 WGI</p> <p>Author of NRC Climate Change Science: An Analysis of some Key Questions (2001)</p> <p>Author of NRC Potential Impacts of Climate Change on U.S. Transportation (2008)</p> <p>Co-Chair and Editor-in-Chief of USGCRP Global Climate Change Impacts in the United States (2009)</p> <p>Author, Editor, and Executive Team of CCSP SAP 1.1: Temperature Trends in the Lower Atmosphere (2006)</p> <p>Co-Chair of CCSP SAP 3.3: Weather and Climate Extremes in a Changing Climate (2008)</p> <p>Reviewer for CCSP SAP 4.7: Impacts of Climate Change and Variability on Transportation Systems (2008)</p>
Gavin Schmidt	<p>Reviewer of IPCC AR4 WGI</p> <p>Reviewer of CCSP SAP 1.2: Past Climate Variability and Change in the Arctic and at High Latitudes (2009)</p> <p>Reviewer of CCSP SAP 3.4: Abrupt Climate Change (2008)</p>

Susan Solomon;	Co-Chair, IPCC WGI Reviewer of NRC Climate Change Science: An Analysis of some Key Questions (2001) Reviewer of USGCRP Global Climate Change Impacts in the United States (2009) Reviewer of CCSP SAP 2.3: Aerosol Properties and Climate Impacts (2009) Reviewer of CCSP SAP 2.4: Trends in Ozone-Depleting Substances (2008)
Thomas Wilbanks	Lead Author of AR4 WGII Author of USGCRP Global Climate Change Impacts in the United States (2009) Author of CCSP SAP 4.5: Effects on Energy Production and Use (2007) Lead Author of CCSP SAP 4.6: Analyses of the Effects of Global Change on Human Health (2008)
Phil DeCola	Executive Office/Liason for Global Climate Change Impacts in the United States (2009) NASA Representative for the CCSP SAP 2.1: Scenarios of GHG Emissions and Atmospheric Concentrations (2007) Author of CCSP SAP 2.3: Aerosol Properties and Climate Impacts (2009) Led the initial discussions that resulted in the inclusion of SAP 2.4: Trends in Ozone-Depleting Substances (2008)
Linda Joyce	Reviewer to CCSP SAP 4.2: Thresholds of Change in Ecosystems (2009)
Anne Grambsch, EPA Employee	Lead Author of CCSP SAP 4.6: Analyses of the Effects of Global Change on Human Health (2008)
Jerry Hatfield;	Principal Author EPA Impacts of Global Change on Regional U.S. Air Quality (2009) Author of USGCRP Global Climate Change Impacts in the United States (2009) Author of CCSP SAP 4.3: Agriculture, Land Resources, Water Resources, and Biodiversity (2008)
Michael McGeehin	Author of CCSP SAP 4.6: Analyses of the Effects of Global Change on Human Health (2008)