

## **SUPPORTING STATEMENT**

### **Mortality Risk Valuation: An exploration of alternative nomenclature through focus groups**

#### **(1) Title of the Information Collection**

**Mortality Risk Valuation: An exploration of alternative nomenclature through focus groups**

#### **(2) Short Characterization/Abstract**

In pursuing its mission to protect human health and the environment, the EPA issues regulations that reduce environmental risks to human health. These rules are informed by scientific analyses, including benefit-cost analysis as required for every economically significant regulation—those with an estimated economic impact of \$100 million or more in any one year—and others as required by law.

Although the risk reduction accruing to any one individual from an environmental regulation are typically small (e.g., 1-in -10,000 reduction in risk), when aggregated over the entire affected population, the total benefits can be sizable and are often reported in terms of “lives saved.”

The monetary value associated with these reductions in mortality risks are derived from published studies that either elicit willingness to pay estimates using stated preference techniques or marginal willingness to accept estimates using hedonic wage analyses. Ultimately, the individual valuation estimates for these small changes in risk are themselves aggregated and reported as a “value of statistical life” or VSL. The VSL is then applied in Agency economic analyses to value the aggregated estimates of mortality risk reduction, or lives saved, and as such figures prominently in the estimated benefits for many regulations issued by the EPA.

The VSL is sometimes misconstrued, however, as a measure of the dollar value of avoiding certain death for a single individual. At times, this mischaracterization has led to surprise and even incredulity as people react to the notion of “placing a dollar value on human life,” rather than what is actually intended with the VSL. Cameron (2010) discussed confusions that often surround the VSL terminology in more detail. Further, use of a VSL reporting convention can be difficult to describe and explain in economic analyses when the risk reduction associated with a policy results in a fraction of a statistical life. These confusions make it difficult for EPA to effectively communicate the impact of its policies and regulations with members of the public. It is incumbent upon the Agency, in the interest of improved transparency, to consider alternative means of describing the quantified and monetized mortality risk benefits to more accurately reflect the good in question.

In a 2010 white paper shared with the EPA’s Science Advisory Board (U.S. EPA 2010), the EPA proposed a shift in terminology away from this often misunderstood “value of a statistical life” to a term that more accurately describes the nature of the health risk changes that are being analyzed in its benefit cost analyses. EPA’s Science Advisory Board was generally supportive of this proposal but recommended that the Agency adopt a new term only after carefully exploring

a range of alternatives, with the aid of focus groups and discussions with relevant user groups (USEPA 2011, p. 1).

### **(3) Need for the Collection**

The goal of this project is to evaluate, through focus group discussions, alternatives to the term “value of statistical life” that better and more accurately communicate the underlying concept. It is important and necessary to both EPA and the public that the Agency effectively and meaningfully describe the impact of policies and regulations within the context of benefit-cost analysis. The term “VSL” appears to be an impediment to this kind of effective communication.

Following the advice provided by the SAB-EEAC, the EPA intends to explore the understandability of a range of new terms and reporting conventions to effectively and more accurately convey the changes in health risk and their monetary value with members of the public. Alternatives include some terms already used in the economics literature (e.g., “value of risk reductions” (VRR) for mortality<sup>1</sup>), and closely related terms (e.g., “value of mortality risk,” “value of a statistical case”).

These focus groups are one part of a suite of activities that will inform a proposed update to the term for valuing mortality risk reductions. EPA will summarize the information discussed in the focus groups, including the suggestions, reactions, and themes that emerge within and across the focus groups. EPA will then discuss the focus group findings with EPA management, public affairs and communications specialists (e.g., Office of Public Affairs), other federal agencies, academics and other practitioners, and users within the agency before proposing modifications to the terminology used to describe the value of mortality risk reductions in EPA benefit-cost analyses. Following input from experts, users, and management, EPA will propose modifications to its guidance on this issue if necessary. Any revised guidance will be further vetted internally prior to introduction in EPA’s *Guidelines for Preparing Economic Analyses*.

### **(4) Non-duplication**

While the communication challenges surrounding the use of the term “Value of a Statistical Life” have been documented in the literature (Cameron, 2010), to our knowledge no systematic effort has been made to identify appropriate and accessible terminology for communicating the value of mortality risk reductions to non-economists.

### **(5) Consultations**

This is a new focus group request (not a renewal of an ongoing collection effort) so no periodic consultations with persons outside of the Agency have been conducted related to this effort.

This collection, however, is in keeping with recommendations made to the EPA by the SAB’s Environmental Economics Advisory Committee (U.S. EPA, 2011).

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<sup>1</sup> VRR was suggested by the SAB-EEAC (USEPA 2011) and has been used in at least two published studies since that time (Scotton and Taylor 2011, Hensher et al. 2011).

This collection may be of interest to other Federal, State, and Local Agencies that engage in benefit cost analysis associated with health risk reductions, as well as to the Office of Management and Budget. EPA will make a concerted effort to keep interested parties informed of progress of this effort.

**(6) Peer Review Plans**

The results of the focus groups will be summarized and discussed in a White Paper, as noted above, that will be circulated for internal review through EPA’s Economics Forum and with Agency management, Agency public affairs and communications specialists, economists from other federal agencies, as well as academics and other practitioners. Following input from experts, users, and management, EPA will propose modifications to its guidance on this issue if deemed appropriate. Any revised guidance will be further vetted internally prior to being introduced in EPA’s *Guidelines for Preparing Economic Analyses*. Note that EPA’s Science Advisory Board has endorsed movement away from the use of “value of a statistical life” but encouraged EPA to explore a range of alternatives, with the aid of focus groups and discussions with relevant user groups, before formally introducing a change in policy (USEPA 2011, p. 1).

**(7) Confidentiality**

The focus group materials will fully conform to federal regulations – specifically the Privacy Act of 1974 (5 U.S.C. 552a), the Hawkins-Stafford Amendments of 1988 (P.L 100-297), and the Computer Security Act of 1987. Each prospective participant will be informed that their participation in the exercise is voluntary. The identities of the individuals will be kept confidential by the investigators and not associated with their responses in any report.

**(8) Sensitive Questions**

There are no questions included in the focus group materials on sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private or sensitive materials.

**(9) Respondents**

Respondents will be members of the general public who volunteer to participate in focus groups and interviews. Participants will be recruited so as to provide adequate representation of the target population.

**(10) Collection Schedule**

The expected timeline for the data collection in three focus groups is as follows. Note that results from initial focus groups may result in modifications to focus groups scripts for those that follow.

Task:	Expected Completion Date:
Contact potential respondents (with contractor support)	Start 2 Weeks from ICR approval (on rolling basis)
Conduct Focus Groups	3-8 Weeks from ICR approval

**(11) Respondent Burden**

Three 2-hour focus groups of 10 participants each are planned. Participants for focus groups will be recruited from the general population in areas outside of the Washington, DC metro area (e.g., Baltimore, Richmond). The respondent burden for focus groups is 60 hours.

In summary, the total burden for voluntary respondents consists of:

Focus groups:  $3 \text{ groups} * 10 \text{ people/group} * 2 \text{ hrs per person} = 60 \text{ hours.}$

**References:**

Cameron, T. A. 2010. Euthanizing the Value of a Statistical Life. *Rev Environ Econ Policy* 4 (2): 161-178.

Hensher DA, Rose JM, de Dios Ortuzar J, Rizzi LI. 2011. Estimating the value of risk reduction for pedestrians in the road environment: an exploratory analysis. *Journal of Choice Modelling* 4(2):70-94.

Scotton CR, Taylor LO. 2011. Valuing risk reductions: incorporating risk heterogeneity into a revealed preference framework. *Resource and Energy Economics* 33:381-397.

USEPA. 2010. Valuing Mortality Risk Reductions for Environmental Policy: A White Paper. SAB Review Draft. Office of Policy, National Center for Environmental Economics. December 10. Available at:  
[http://yosemite.epa.gov/sab/sabproduct.nsf/c91996cd39a82f648525742400690127/34D7008FAD7FA8AD8525750400712AEB/\\$File/White+Paper+\(Dec.+2010\).pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/c91996cd39a82f648525742400690127/34D7008FAD7FA8AD8525750400712AEB/$File/White+Paper+(Dec.+2010).pdf).

USEPA. 2011. Review of *Valuing Mortality Risk Reductions for Environmental Policy: A White Paper (December 10, 2010)*. Office of the Administrator, Science Advisory Board. EPA-SAB-11-011. July 29. Available at:  
[http://yosemite.epa.gov/sab/sabproduct.nsf/298E1F50F844BC23852578DC0059A616/\\$File/EPA-SAB-11-011-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/298E1F50F844BC23852578DC0059A616/$File/EPA-SAB-11-011-unsigned.pdf)