

Request: The Census Bureau plans to conduct additional research under the generic clearance for questionnaire pretesting research (OMB number 0607-0725). We will be conducting cognitive interviews on the Hazardous Materials Safety Incident Report (DOT Form F 5800.1)

Purpose: The Hazardous Materials Safety Incident Report (DOT Form F 5800.1) is a form used to collect data on certain types of hazardous materials incidents. The form is regulated by the Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA's Office of Hazardous Materials Safety Office (OHMS) requires submission of this form any time there is a hazardous incident in transportation via air, rail, highway, or water. The form collects information on the hazardous material, the packaging involved, and the consequences to stakeholders, the environment, and the public. The purpose of the form is to mitigate risk, analyze gaps, and enhance safety. More information about the Hazardous Materials Safety Incident Report can be found at <https://www.phmsa.dot.gov/hazmat-program-management-data-and-statistics/data-operations/incident-reporting>.

Recently exploratory research has been conducted to assess the design of the Hazardous Materials Safety Incident Report form and its instructions. Redesign recommendations have led to revisions to the existing form. To assess the proposed changes to the form and to inform additional changes warranted to the form, staff from the Data Collection Methodology & Research Branch (DCMRB) within the Economic Statistical Methods Division (ESMD) of the Census Bureau will be conducting cognitive and usability interviews. For this testing, we will interview up to 50 respondents in two separate rounds of testing (20-25 participants per round).

Method:

The method of research will be cognitive and usability interviews for both proposed changes to the paper and online version of the Hazardous materials incident report form. Half of the requested participants will take part in the Usability evaluation whereas the remaining half of the requested participants will take part in the Cognitive testing. The interviews will take place in-person at participants' places of business or another location of their choosing. The interviews will follow a semi-structured interview protocol (attachment C). Additional observers from the Department of Transportation may be present at the interviews.

Cognitive interviews will be audio recorded with the participants' permission, to aid researchers in accurately summarizing key findings from the interviews. Eye tracking will also be used to assess participants' visual interaction with the online version of the form during the usability evaluations. A consent form will be used to obtain participants permission for the use of eye tracking and audio recording.

Sample Population:

PHMSA will provide DCMRB staff with a list of businesses and filer contact information, from which we will recruit. The frame of filers will be persons who have submitted an incident report form for their company.

Approximately 50 interviews will be conducted in total, with 20-25 interviews in each round of

testing. This number of interviews was selected because it is a manageable number of interviews for the time period allotted, and should be large enough to provide reactions to the questions, layout and help content that are representative of the form population.

Fifty interviews will allow us to cover different cities in a cost-effective manner for testing, which we intend to do in order to meet with participants from companies covering a variety of transport modes. The specific sites of testing have yet to be determined.

Sample recruitment:

We will contact potential participants, explain the nature of our research, and ask them to participate in our study. The sample of participants will be those who are able to be contacted and who agree to participate in the study

Participants will be informed that their participation is voluntary and that the information they provide is confidential. We will not be providing monetary incentives to participants in this study. Once interviews are scheduled, researchers will send respondents a confirmation via email, and may conduct a reminder calls a few days before the scheduled meeting.

Timeline:

Recruiting for these interviews will begin as early as February 2020, for interviews that will be conducted during February 2020 through August 2020.

Our goal is to schedule up to 50 interviews. We expect that each interview will last no more than 60 minutes (50 cases x 60 minutes per case = 50 hours). Additionally, to recruit respondents we expect to make up to 5 phone contacts per completed case. The recruiting calls are expected to last on average 3 minutes per call (5 attempted phone calls per completed case x 50 cases x 3 minute per case = 12.5 hours). Thus, the estimated burden for this portion of the project is 62.5 hours (50 hours for interviews + 12.5 hours for recruiting).

Language:

Testing will be conducted in English only.

Below is a list of materials to be used in the current study:

- 1. Attachment A1 (existing form) A2 (proposed revisions to select sections of the form) Attachment A3 (online version of the existing form):** Copies of the existing Hazardous Materials Safety Incident Report with the types of questions being evaluated and a copy of proposed changes to select sections of the form.
- 2. Attachment B_1 (Usability) and Attachment B_2 (Cognitive):** Consent form to obtain participant consent for participation and audio-recording and eye-tracking during the usability sessions of the online version of the form (D_1) and audio recording for cognitive testing sessions of the paper form (D_2)
- 3. Attachment C:** a copy of the testing protocol that will be used during the interviews
- 4. Attachment D:** Demographic questionnaire (Usability study) to obtain participant characteristics

5. **Attachment E:** Computer use and Internet experience questionnaire (Usability study) to get an understanding of participants' experience using computers and the internet
6. **Attachment F:** Satisfaction questionnaire (Usability study) to allow for a subjective satisfaction measure to be gathered based on the participants' experience with the online form

The contact person for questions regarding data collection and statistical aspects of the design of this research is listed below:

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