OMB Supporting Statement Part A and Part B

A. JUSTIFICATION

A.1. *Circumstances Making the Collection of Information Necessary*

This is a request for the implementation of a national in-home survey to estimate usage, user hazard perception, and functionality of the smoke and carbon monoxide (CO) alarms in US households. This would be accomplished through the administration of the Survey on Usage and Functionality of Smoke Alarms and Carbon Monoxide Alarms in US Household, hereby referred as the SCOA survey. This data collection effort will provide an updated national estimate of operability of smoke alarms and carbon monoxide alarms based on direct observation. This data will allow for better targeting of policy, messaging, and interventions to improve the operability rate of smoke and CO alarms, as well as inform the Consumer Product Safety Commission (CPSC) of recommendations to state/local jurisdictions related to codes, standards, and/or regulations of smoke and CO alarms.

In 1992, the Consumer Product Safety Commission (CPSC) sponsored a national in-home survey to collect information on the number of residential smoke alarms in actual use in homes and to evaluate the operability of the sampled alarms. The results were published in the 1994 report, Consumer Product Safety Commission Smoke Detector Operability Survey Report On Findings[1], which turned 25 years old in 2017. Although the survey results were instrumental for many years in developing codes and standards related to smoke alarms, subsequent changes in technology, installation codes, and state/local ordinances have rendered the information outdated and less effective, and therefore less applicable. Given the changes in technology and state/local regulations, the increased use of CO alarms, and the value of the past study, CPSC seeks to collect new data related to smoke and CO alarm use and operability.

Two organizations, National Fire Protection Association (NFPA) and Vision 20/20, have expressed the need and benefits of repeating the CPSC 1992 survey. The NFPA publishes a periodical report, Smoke Alarms in U.S. Homes Fires[2], which provides the latest information about smoke alarms in home fires. The report recognizes the importance of the 1992 study. The report states, "This study is the gold standard for smoke alarm research. The most complete study of smoke alarm presence and operational status in the general population was done by the U.S. Consumer Product Safety Commission's (CPSC's) National Smoke Detector Project in 1992." The report points out the key aspect between the CPSC study and other recent studies - "This [CPSC] project surveyed the general population, not just high-risk groups or people who had fires." More recent studies by other groups have usually been combined with smoke alarm installation programs and typically target high-risk groups, rather than the general population. The NFPA still sees the importance of the survey even though the information may be outdated. The Institution of Fire Engineers US Branch has established a steering committee, Vision 20/20, comprised of noted fire service and related agency leaders to guide a national strategic planning process for the fire loss prevention that results in a national plan that will coordinate activities

[1] Charles L. Smith, *Smoke Detector Operability Survey – Report on Findings*, (Bethesda, MD: U.S. CPSC, November 1993).

[2] Marty Ahrens, *Smoke Alarms in U.S. Home Fires*, Quincy, (MA: NFPA, September 2015).

and fire prevention efforts. In March 2015, Vision 20/20 hosted a one-day Smoke Alarm Summit at Johns Hopkins Bloomberg School of Public Health that included representatives from different stakeholder groups such as the fire service, academia, government, non-profit, and private sector organizations convened on the summit to develop consensus recommendations on:

1. Evidence-based and evidence-informed policy and practice interventions that will increase the installation and maintenance of smoke alarms in all homes in the United States
2. High priority research gaps that need to be addressed
3. Next steps to ensure that the findings from this meeting inform policy and practice

The findings from the report, Evidence Informing Action: Consensus Priorities to Increase the use of Smoke Alarms in U.S. Homes,[3] identified the next steps and priorities for a national effort to increase the installation and maintenance of smoke alarms that were obtained from experts who presented at the Summit and respondents who provided feedback during and after the Summit. The number one priority was, "1. Conduct a national census (or representative sample in-home survey) on the prevalence and characteristics of smoke alarms." The experts at the summit all agreed that an updated national survey needs to be conducted to develop a national effort to increase the installation and maintenance of smoke alarms in the US.

A.2. *Purpose and Use of the Information Collection*

The purpose of the SCOA survey is to collect data that will assist CPSC with better estimation of the number and types of smoke and CO alarms installed in US households, the proportion of working smoke and CO alarms, the characteristics of residences and residents where the smoke and CO alarms are not operational, perceptions of residents related to the cause of "false" alarms or causes of faulty alarms, consumer hazard awareness, and consumer behavior related to alarm use and smoke and CO hazards.

The information collected from this survey will allow CPSC to provide an updated national estimate of operability of smoke alarms and CO alarms based on direct observation. It will also allow us to create a demographic profile of groups that do not have operable smoke alarms and/or CO alarms. This includes measures from the perspective of household members lacking operable alarms as to why they lack functional alarms. This will allow for better targeting of policy, messaging and interventions to improve the operability rate of these alarms. It will also provide insights as to the kinds of alarms that are present to determine whether one variety or another is more likely to be inoperable as well as provide some measure as to the age of alarms in households. Results of the survey will inform CPSC of recommendations to state/local jurisdictions related to codes, standards, and/or regulations of smoke and CO alarms. The information can help improve the voluntary standard for carbon monoxide alarm, UL 2034[4], and guide state and local jurisdictions for the use and installation of CO alarms. While the installation

[3] Johns Hopkins Center for Injury Research and Policy, *Evidence Informing Action: Consensus Priorities to Increase the use of Smoke Alarms in U.S. Homes* (Warrenton, VA: National Smoke Alarm Submit, 2015).
[4] Underwriter Laboratories, "Standard for Single and Multiple Station Carbon Monoxide Alarms," Standard 2034, Edition 4, March 31, 2017. https://www.shopulstandards.com/ProductDetail.aspx?UniqueKey=32610

codes for the two products, especially as required by states or local jurisdictions, are different, it was determined that the information collection regarding these two products could be combined in one survey as a means of optimizing resources and reducing burden.

A.2.1. *Description of Survey*

The SCOA survey seeks to collect information from 1,185 households* within the United States. The survey will be conducted only through face-to-face in-home interviews. Since previous research showed that self-reporting surveys on use and functionality of smoke alarms provided overestimated results of smoke alarms operability, CPSC identified the need to conduct in-home direct testing and examination of smoke alarms, in addition to conducting data collection through traditional survey questions.

Households will be recruited to participate at their front door. If the head-of-household is interested in participating they will be immediately screened. In accordance with CDC guidelines, the interviewer will ask a series of questions to ensure that no one in the household has COVID-19, symptoms of COVID-19, or are currently quarantining because of COVID-19. If respondents clear all questions, the rest of the screening questions would be asked. This ensures a safe environment for the research team and the members of the household.

During the screening process, if the respondent indicates they have a smoke alarm that is not connected to a central or security alarm, and thus allows a direct testing of the alarms, the respondents will be eligible for the full-length in-home interview. However, if the smoke alarm cannot be tested because the household does not have an alarm installed or if the alarms are connected to a central alarm system that will notify the police or fire department, then the respondent will only be eligible for a shortened version of the survey. This shortened version consists of a subset of survey questions about safety attitudes and demographics. CPSC's Contractor—EurekaFacts, a market and social sciences research company—will conduct all the tasks related to design, administration, fielding, analysis and reporting of the survey.

This survey will allow CPSC to better assess the next steps and priorities to increase installation and maintenance of smoke and CO alarms for the general population by understanding their level of awareness, perceptions, and demographics. The survey items will also help inform CPSC of recommendations to provide state/local jurisdictions related to codes and standards.

The SCOA survey will provide the only source of data available to answer the following research questions:

- What proportion and number of households have smoke and/or carbon monoxide (CO) alarms installed in their home? Of these households with alarms, what proportion and number have an operational alarm?
- What proportion and number of respondents perceive their home as safe? Does the availability of smoke or CO alarms influence their sense of safety? For what reasons do respondents not have alarms installed?

* 1,185 in-home surveys include 1,055 in the main survey and 130 in the pilot survey

- Does the characteristics of a respondent's residence affect the availability or operability of smoke or CO alarms? Does the characteristics of residency characteristics affect fire and CO risks?
- What proportion and number of respondents are aware of how to maintain and test their fire and/or CO alarms? Of these respondents, what methods, if any, do they use to maintain and test their alarms?
- Are there behaviors or activities, if any, that impact respondents either having alarms in their home and/or having functioning alarms in their home?
- What proportion of respondents seek out information about fire and CO safety? Of these respondents, what resources do they use to seek out information about fire and CO safety?
- What, if any, demographics demonstrate a relationship between respondents' possession of fire or CO alarms and their risk of fire and/or CO incidents?

The table below shows how survey items will aid in answering the research questions and what type of information it will provide.[5]

Table 1. Question Mapping of Survey Instrument to Research Purpose

Research Question	Corresponding Survey Item(s)	Purpose of Collected Information
What proportion and number of respondents have smoke and/or carbon monoxide (CO) alarms installed in their home? Of these respondents with alarms, what proportion and number have an operational alarm?	4a-4c, 5a-5c, 11a-11d, 14a-14d, 15a, 15b, 19a-19d, 20, 22a-22b, 25, 26-1a-26-1aa, 30, 32	The results will provide insight into the prevalence of alarms in respondents' homes, identify the types of alarms installed, and determine how many, if any, alarms are operational. Conversely, these items will also aid in revealing the proportion of the residents who do not have alarms in their home and help uncover the reasons why.
What proportion and number of respondents perceive their home as safe? Does the availability of smoke or CO alarms influence	4d, 5d, 20, 29, 30, 31, 32	This information will help understand how respondents personally define "safety" and how this perception influences

[5] The terminology "smoke alarms" and "CO alarms" is used in technical codes and standards to describe devices that incorporate a sensing component (detector) and an audible component (alarm). It was determined through cognitive testing that "smoke detector" and CO detector" has a higher consumer understandability for smoke alarms and CO alarms. The instrument incorporates the terminology "smoke detector" and CO detector" but in this document the terminology smoke alarm, CO alarm, or alarms (both units) will be used.

their sense of safety? For what reasons do respondents not have alarms installed?		whether or not they have alarms installed within their homes.
Do the characteristics of a respondent's residence affect the availability or operability of smoke or CO alarms? Do the characteristics of residency characteristics affect fire and CO risks?	1a, 4a – 4c, 5a – 5c, 6, 7, 8, 9a – 9c, 25, 27, 28	The results will provide insight into if the resident owns or rents the home, duration of residency, and the age of the household. These items will shed light on if there is a relationship between the characteristics of a respondent's home and their status of having alarms such as having an attached garage unit if they live in a single family detached house.
What proportion and number of respondents are aware of how to maintain and test their smoke and/or CO alarms? Of these respondents, what methods, if any, do they use to maintain and test their alarms?	10a – 10c, 11a – 11d, 12, 13, 18a – 18b, 19a – 19d, 21, 23	These questions help understand whether or not people have the knowledge and ability to test and maintain their smoke and/or CO alarms and the types of methods used. This can inform CPSC of the type of information that needs to be dispersed.
Are there behaviors or activities, if any, that impact respondents either having alarms in their home and/or having functioning alarms in their home?	33a – 33d, 35	This information is important as it will help understand the relationship between how respondents behave and what activities they engage in that may influence the likelihood of having alarms in their home such as their cooking behaviors of using a stove or oven.
What proportion of respondents seek out information about fire and CO safety? Of these respondents, what resources do they use to seek out information about fire and CO safety?	34a – 34c	This information will assist CPSC with addressing the best types of resources to disperse information about fire and CO safety.

What, if any, demographics demonstrate a relationship between respondents' possession of fire or CO alarms and their risk of fire and/or CO incidents?	36 - 44	This will help provide insight into the relationship between respondent demographics and their risk of fire or CO incidents. This will also shed light as to their status of whether or not they have a smoke or CO alarm(s).

A.2.2. *Survey Administration Procedures*

Originally, randomly selected households within the randomly selected tracts were contacted in advance via a mailed pre-notification letter. Households were then called to be screened to determine their eligibility for either an in-home or telephone interview and scheduled for a relevant type of administration mode. The initially approved OMB methodology yielded a response rate of less than one quarter of 1% (only 0.23%) during recruitment efforts in two metropolitan areas. OMB approved revisions were made to the screening instrument to raise the appeal, urgency and information on the public benefit of the study, along with streamlining of language for greater efficiency in screening potential participants. Following these revisions to the recruitment efforts and their implementation, the response rate results were unchanged and remained inadequate in meeting the schedule and the current contract with CPSC.

In the fall of 2019, EurekaFacts submitted and was approved by OMB to redesign the recruitment effort as a random walk door-to-door knocking sample methodology. To maintain the structure of the original recruitment procedure, field teams will first distribute door hangers as a pre-notification that researchers will be knocking on doors asking for participation in a survey. This provides households a distinctive piece of literature with vital information about the study and sources to seek out more information. A map of the tract will be marked where the door hangers were left, so field interviewers can follow the same path to recruit from those households a few days later.

The recruitment, screening, and in-home survey will be conducted by a qualified two-member team (this may consist of fire inspectors, fire educators, firefighter from a local fire department, survey research professionals, or other qualified individuals with either fire safety or research experience from the local area). The field teams will be made up of local partners who understand and can gain the trust of the local community. Both members will present their government-issued IDs and their official badges (either representing the company they work for or badges designed by EurekaFacts for the purpose of the study) to confirm their identity and legitimacy. The team will carry with them a letter printed on official letterhead with endorsements from the local fire department and CPSC, should they be needed. If the home is in an apartment building or condominium, prior permission will be obtained from the property manager to proceed with the in-home survey administration. A consent form will be provided to the participant to explain the purpose, the statement of confidentiality, and the benefits and potential risks of the study.

Following the entrance, the survey professional will begin to administer the questions based on the respondent's residence type, and smoke and CO alarms availability and functionality. Once

the survey professional finishes asking questions about the smoke and CO alarms, the survey team will move on to examine the smoke and CO alarms in the residence. The fire alarm inspector will then identify, test, and examine the alarms to determine different variables such as their operability, energy source, their type, and age. After examining each alarm, the survey team, and resident, will repeat the testing procedure on another alarm (if applicable). Due to the time constraint of the survey, not all alarms in a home can usually be inspected. The survey team will coordinate with the participant to test a reasonable number of alarms in as varied of locations as possible within the time constraint of the survey.

If the alarm or alarms are found to be faulty, the resident will have the option of either receiving a new alarm, receiving new batteries, or having no action taken at all if the respondent chooses not to have the alarm fixed or replaced. In all cases, respondents will sign a waiver indicating whether they refuse, or any other course of action taken during the in-home administration.

Once the administration is complete and the final set of demographic questions is administered, the survey professional will offer the participant the monetary incentive for their completion of the survey.

EurekaFacts will work with on-the-ground partners to take all necessary COVID-19 precautions and procedures in accordance with local and federal guidelines throughout the duration of the survey. This includes working with partners to be sure all guidelines are being implemented, including wearing masks, using hand sanitizer, maintaining social distancing and regularly checking the health and wellness of all those involved in the study. EurekaFacts will coordinate training of field workers to apply these principles in the field and provide the needed personal protective equipment (PPE).

EurekaFacts will provide masks for all field workers and extra masks to give to participants that do not have one on hand. Field teams will be instructed to maintain a 6-foot distance when screening heads of households at the door and when interviewing them in their house. Field teams will each be given hand sanitizer to use periodically throughout the day as well as disinfecting wipes for tablet surfaces.

A.2.3 *Audiences of Data and Results*

The designated CPSC Contracting Officer's Representative (COR) and assigned CPSC staff will be the primary audience of the data and results. A summary report of aggregated results will be presented that encompasses all phases and methods employed in the study and will present a comprehensive description to help inform the agency of the number and types of smoke alarms and CO alarms installed in households, the characteristics of residences and residents where the smoke and CO alarms are not working, perceptions related to the cause of "false" alarms or causes of faulty alarms, and resident alarm maintenance habits. In addition to the summary report, a PowerPoint presentation, raw data, a table of univariate results, and various data analysis documentation will also be delivered electronically to the primary audience identified above.

A.2.4 *Methods of Dissemination*

The contractor's final report will be made available to the public after the draft report has been reviewed and approved by the CPSC's COR and assigned CPSC staff.

The final report will be released by the Commission by disseminating the report on the agency's website and presentations at meetings and conferences related to the subject matter. The procedures to disseminate the information by the Commission, its staff, agents and representatives will be accordance with the law and Commission policy to ensure the information is accurate and not misleading.

In order to encourage dissemination of the findings, the report will be freely accessible on cpsc.gov. The work was prepared in the course of the author's official contracting duties with CPSC, thus Title 17 U.S.C. Section 105 provides that there can be no copyright in a United States government publication.

A.3. *Use of Improved Information Technology (IT) and Burden Reduction*

In order to minimize respondent burden, the respondents that do not have smoke alarms installed or have a central alarm system, and thus are not eligible for the full-length interview which includes alarm inspection and testing, will participate in the shorter version of the survey and answer only a portion of questions. All data from the in-home interviews, both full-length and short, will be collected using a tablet computer. Both versions of the survey instrument will be programmed into a singular programmed survey using Qualtrics software and will be administered via tablet, with the interviewer reading the questions to the participant. Qualtrics is programmed with the appropriate question skipping patterns to ensure that interviewers only ask each respondent survey items appropriate for the respondent's residence type, and smoke and CO alarms availability and functionality.

The instrument was first pre-tested through in-depth cognitive interviews with a sample of 18 respondents (OMB Control Number 3041-0136) to certify that the survey items are clear and easy to understand when the survey is administered on a wider scale, reducing any potential burden for respondents.

Aligned with the original approach, EurekaFacts sought to identify and adjust any recruitment or data collection procedures or aspects to the instruments during the initial launch of the study. In the original methodology, EurekaFacts found that the mailing and multiple attempts of calling participants yielded a very low response rate (less than one-quarter of 1%). EurekaFacts initially sought to correct this issue by purchasing more sample and focusing on calling households first, then mailing interested residents. When this did not change response rate, EurekaFacts changed methodology entirely to a door-to-door random walk recruitment. After the first round of recruitment and data collection, EurekaFacts found no major issues and continued with the data collection effort. After the first 50 completes were collected, a brief analysis of selected questions was conducted to ensure data quality and instrument functionality; no changes were needed. Additionally, an internal debrief was conducted and lessons learned from those initial interviews were incorporated into the rest of the data collection effort and highlighted in the pilot report.

EurekaFacts plans to continue fielding the study to collect 1,055 total completes. The information will be summarized into a final report, which will be electronically submitted to the CPSC Contracting Officer's Representative (COR).

A.4. *Efforts to Identify Duplication and Use of Similar Information*

The intent of this data collection is to obtain information that is not readily available elsewhere. The last time this type of data was collected occurred 25 years ago by CPSC. Other recent studies were focused on targeting high-risk groups or people who had fires; however, the estimates for a general population are not available, thus, CPSC specifically selected to focus this survey on the general population. This data collection will help CPSC develop a national effort to increase installation and maintenance of smoke alarms in the U.S.

The need for the proposed data collection and the design of this national survey was based on several consultative efforts with and feedback from experts, stakeholder groups such as the fire service agencies, academia, government, non-profit and private sector organizations[6] [7]. The collected input from experts and stakeholders ensured that the present survey does not duplicate the information available elsewhere.

A.5. *Impact on Small Businesses or Other Small Entities*

The information will not be collected from small businesses or other small entities.

A.6. *Consequences to Federal program or policy activities if collection is not conducted or is conducted less frequently*

The 1992 national in-home survey, sponsored by CPSC, helped collect information on the number of residential smoke alarms in actual use in homes and evaluated the operability of the sampled alarms. The 1992 CPSC survey had the most impact to the installation code, NFPA 72[8], for smoke alarms. The 1992 CPSC survey set the foundation for many installation and give-away programs to target specific groups that do not have smoke alarms, thus increasing the presences of smoke alarms in US households. The presence of smoke alarm in the household considerably increases the chances of the occupants escaping a home fire.

However, this survey will be 25 years old as of 2017. In order to ensure that the collected information being referenced remains current and that changes in technology and installation codes are upheld, the collection of information must be conducted again. By implementing the new nation-wide SCOA survey, the codes and standards will be current so that fire prevention organizations and agencies will have all the up-to-date information needed to efficiently and effectively target the areas for improving life safety and saving lives.

A.7. *Special Circumstances Relating to the Guidelines of 5 CFR 1320.5*

6. Johns Hopkins Center for Injury Research and Policy, *Evidence Informing Action: Consensus Priorities to Increase the use of Smoke Alarms in U.S. Homes*.
7. Amanda Kimball, P.E., *Workshop for Survey on Usage and Functionality of Smoke Alarms and CO Alarms in Households,* (Quincy, MA: NFPA, 2017).
8. NFPA 72 – National Fire Alarm and Signaling Code, (Quincy, MA: NFPA, 2016).

There are no special circumstances. This information collection is consistent with the guidelines prescribed in 5 CFR 1320.5.

A.8. *Consultation and Public Comments*

Part A. PUBLIC NOTICE

A 60-Day Federal Register Notice for the collection published on July 23, 2021. The 60-Day FR citation is 86 FR 39006. The CPSC received one comment during the 60-Day Comment Period. The commenter stated that although survey email may produce some results, door-to-door solicitation should not be conducted because people do not want strangers coming to their front door.

Staff agrees that current public perceptions regarding an in-person survey are significantly different than when the smoke alarm survey was last conducted in 1992. However, the initial rollout of the survey in 2019, soliciting randomly selected households via a mailed pre-notification letter, which were subsequently screened for an in-home or telephone interview, resulted in an extremely low response rate. To increase the response rate, the SCOA survey recruitment effort was redesigned as a door-to-door walk-recruitment methodology. Field teams distribute door hangers on randomly selected households to provide prenotification that researchers will be knocking on doors asking for participation in a survey. A pilot survey conducted in the Washington metro area showed significant improvement in the response rate. Accordingly, to obtain the best information available, the SCOA survey data collection will continue to use this door-to-door recruitment methodology, recognizing that home visits by trained data collectors with inspection and testing provide much better-quality data compared to telephone or Internet surveys.

A 30-Day Federal Register Notice for the collection published on October 26, 2021. The 30-Day FR citation is 86 FR 59152.

Part B. CONSULTATION

CPSC consulted with various stakeholder groups in planning the survey. Stakeholders that participated included representatives from the fire service, enforcers/authority having jurisdictions (AHJs), public educators, researchers, equipment manufacturers, standards developers, and others.

To gauge interest in the need for this data, CPSC hosted or participated in the following industry events:

- SCOA survey planning workshop, hosted by CPSC on February 16, 2017.
- Vision 20/20 workshop on smoke alarms in March 2015. CPSC received input on a representative, in-home survey on the prevalence and characteristics of smoke alarms.
- International Conference & Workshop Current Practices in Emergency Response: Carbon Monoxide Poisoning on September 26, 2018. CPSC received input from representatives from the fire service, enforces/AHJs, public educators, researchers, equipment manufacturers, standards developers, and others on CO poisoning and CO alarms.

EurekaFacts, National Fire Protection Association (NFPA), Vision 20/20, and United States Fire Administration (USFA) were consulted in the availability of accurate smoke and CO alarm operability data for consumer homes. All four confirmed that information for in-home operability of smoke and CO alarms have not been available since the last time the survey was conducted by CPSC in 1992, and that current phone surveys of inoperable smoke alarms in the US are less reliable.

CPSC staff consulted with EurekaFacts in developing and executing the survey. EurekaFacts is compliant with the standards in quality for a research organization.[9] EurekaFacts was consulted on the frequency of collection and the total number of responses required to provide estimates on the operability of smoke and CO alarms in the US.

CPSC staff consulted with EurekaFacts in developing the survey questioner and to ensure the understandability and clarity of the question being asked.

A.9. *Explanation of any Payment or Gift*

Contractor will provide a monetary incentive to respondents through the form of a gift card from a major credit card company. Based on their eligibility, as determined through the screening process, respondents will receive one of two incentive amounts at the completion of the survey. If respondents qualify for the in-home survey administration, respondents will receive a $50 gift card from a major credit card company in appreciation for their completion of the survey. However, if respondents qualify for the shorter survey administration, at the completion of the survey, respondents will receive a $25 gift card from a major credit card company. The variation of monetary value is due to the amount of time and effort involved in the in-home full survey and alarm testing administration compared to the shorter survey administration.

A.10. *Assurance of Confidentiality Provided to Respondents*

Participation in the survey is voluntary and respondents will be so informed before the screening and at the beginning the survey. Subjects are informed of the measures taken to protect their confidentiality in the introductory language read to sampled persons. Information collected from respondents will be kept confidential and only used for research purposes.

Survey respondents will have assigned a Random ID number not linked to any personal identifying information. Respondents' contact information (name, address, phone number, e-mail address) along with the Random ID number will be maintained in one secure database ("Database 1"). The survey responses and respondents/household demographic information will be maintained in a second secure database ("Database 2") where potential survey participants are identified by Random ID Number only. Database 2 will not contain participants' names, addresses, phone numbers, e-mail addresses, or other personally identifying information (PII).

[9] EurekaFacts holds a certification for the ISO 20252: Market, Opinion, and Social Research International Quality Standard.

Analysis will be conducted on data sets that include only respondent ID numbers; they will not contain any identifying data. The software that EurekaFacts will use to collect survey data, Qualtrics, is a secure platform endorsed by the federal government. Qualtrics has FedRAMP authorization, ISO 27001 certification, and FISMA compliance, ensuring data security. All collected data will be secured by EurekaFacts and will be kept on the password protected computers and secure server and locked file cabinets (as applicable), accessible only to project staff.

Access to the facilities and server where data will be stored is restricted only to authorized individuals. Access restrictions are defined for each individual based on his/her role. Access to data requires the entry of a valid account username and password. Project staff receive data security training and sign an assurance of confidentiality of survey data. All project staff complete required annual privacy and security training and sign a document pledging confidentially and maintaining privacy according to Health Insurance Portability and Accountability Act (HIPAA). The training includes information and data security factors, using information sources responsibly, employee responsibilities, and how to report instances where violation of data security is suspected.

Any administrative and PII collected from respondents may be destroyed within 365 days after of the end of the study. However, to ensure the possibility for potential replication of the study in the future, any non-administrative data may be kept by CPSC indefinitely.

A.11. *Justification for Sensitive Questions*

A majority of questions asked in the survey are not typically considered sensitive in nature. Potentially sensitive questions include the demographic questions that ask about the respondent's ethnicity/race, ages of those living in the household, disabilities, and combined annual household income. Both the trained interviewer and the communication materials will reassure that participation is voluntary, that they may choose not to answer some questions, and that responses are confidential. The instructions presented in the survey is designed to make respondents feel as comfortable as possible in answering these questions.

In addition, each respondent will be informed that a unique ID will be assigned to them that does not link to any personal identifying information. Data analysis will be conducted on data sets that include only respondent ID numbers; they will not contain any identifying data.

A.12. *Estimate of hour burden to respondents*

Upon launch of the survey phase in 2019 fielding in two metro areas, response rate and cooperation were very low as outline above, impeding the success of the study within contract timeline, budget and respondent burden level. Revised sampling methods and corresponding response rates were submitted and approved by OMB in the interim from the initial approval and the renewal of the project. To complete 1185 interviews (the total burden for the study including the Washington Metro Area pilot and 24 metro areas that constitute the random sample of primary sampling units), will require 1,552 burden hours on the public. Several factors may lead to lower respondent burden. The revised methodology requires a fewer number of interactions per household which may ultimately reduce the total respondent burden when compared against

the original address-based sampling (mail to phone to household) methodology. (Please see section A.15, for further explanation of methodology and response rate change).

The time for screening an individual and starting the interview is also reduced. Multiple phone calls for screening, scheduling, and confirmation are replaced with interviewers at the door immediately ready to do screen and conduct interviews upon contact with potential participants. The original methodology experienced high attrition between scheduling a session and interviewers arriving at the door, but the revised methodology is expected to receive hardly any barriers to completing a confirmed interview (baring some extreme circumstance) since the interview immediately proceeds after screening.

Below is a discussion of the burden hours.

Table 2. Total Burden Hours by Recruitment and Data Collection Task

Recruitment activity/ Survey instrument	Hours per respondent	Total number of contacted participants	Response rate	Number of respondents	Total hours
Invitation					
Recruitment appeal at door	0.05 (3 minutes)	22,931	30%	6,879	344
Screener					
Agree to screening and are screened and found eligible to participate	0.075 (4.5 minutes)	6,879	17.4%	1,197	90
Survey					
Full-length survey (one hour)	1	1,096	99%	1085	1085
Shortened survey for no-alarm and security alarm households (20-minutes)	0.33	101	99%	100	33
				1185	**1,552**

Total Burden Hours: **1552** hours

According to the U.S. Bureau of Labor Statistics, the total compensation for civilian workers in March 2021 was $39.01 per hour (Employer Cost for Employee Compensation, Table 2, https://www.bls.gov/news.release/ecec.t02.htm). Therefore, CPSC estimates the cost burden for respondents to be $60,544 ($39.01 per hour × 1,552 hours = $60,543.52).

A.13. *Estimate of total annual cost burden to respondents*

There are no costs to respondents to complete this collection other than the labor burden costs addressed in Section 12 of this document, and there are no respondent recordkeeping requirements associated with the SCOA survey. There are no operating, maintenance, or capital costs for respondents associated with the collection.

A.14. *Estimate of annualized costs to the Federal government*

The contracts to design and conduct the Survey on Usage and Functionality of Smoke Alarms and Carbon Monoxide Alarms in Households were issued to Eureka Facts LLC under contract numbers F-16-0091 and F-17-0088 for $562,725 (this figure does not include the cognitive testing phase that was approved through OMB Control Number 3041-0136).

Salary and benefits costs for government personnel assigned to this study are estimated using the January 2021 pay scale for a GS-13, Step 5 employee in the Washington, D.C. area, of $117,516,

and the March 2021 Employer Costs for Employee Compensation (ECEC), published by the U.S. Bureau of Labor Statistics (https://www.bls.gov/news.release/ecec.t02.htm). According to table 2 of the ECEC, 68.8 percent of total compensation is paid in wages and the remaining 31.2 percent is benefits. Therefore, in 2021 the staff cost is $142,340, based on 10 staff months (($117,516/.688) × 10 staff months). In 2022, the staff cost is $106,755, based on 7.5 staff months (($117,516/.688) × 7.5 staff months). And, the total estimated cost to the federal government is $249,095 ($142,340 + $106,755), in government labor.

A.15. *Program changes or adjustments*

Since the initial OMB application and approval in October 2018, EurekaFacts has submitted and been approved to make several changes to the sampling and data collection process.

Changes that have been incorporated into the current process (from most to least significant) include:

1. Modifying the third stage of the sampling approach (selection of occupied housing units in tracts). Originally, houses were randomly selected through ABS (address-based sampling) with follow-up phone call appointments to conduct the interviews, but the extremely low response rate and logistical challenges on part of both participants and field teams results in only a few completed in-home interviews. To streamline the process, the recruitment method was changed to a random walk door-to-door knocking methodology. This allowed for direct recruitment and completion of the in-home interview at one time.
2. Altering the pre-notification document from a mailed letter to a streamlined and eye-catching door hanger to compliment the modified sampling approach. This maintains the process of pre-notifying residents about the study with a cost-efficient alternative that raises both individual and community awareness. Distributing the door hangers provides the field teams flexibility to pre-notify residents of a tract a few days before the intended recruitment effort, thus maximizing the impact of the literature.
3. Increasing the incentive amount from $25 to $50 for completion of the full-length (60 minute) survey interview. This is an important recruitment tool to increase the cooperation rate of contacted households and more closely parallels the monetary incentive offered in 1992, once adjusted for inflation.
4. Implementation of COVID-19 screening questions and protocols. Because of the coronavirus (COVID-19) pandemic, the project was paused in March 2020, pending evaluation of the public health environment to determine when best to relaunch the study in each chosen metro area. EurekaFacts is following the CDC recommendations to ensure both interviewer and participant safety, including masking and social distancing. If heads of households are interested in participating after hearing the introduction and purpose of the study, the interviewer will ask a series of questions to ensure that no one in the household has COVID-19, symptoms of COVID-19, or are currently quarantining because of COVID-19. If respondents clear all questions, the rest of the screening questions would be asked.
5. Inclusion of refusal aversion language to persuade residents to participate. This additional approved language provides field teams with additional information to recruit participants.

6. Revising the expected response rate of the study. The original sampling design resulted in a response rate of 0.23% (or less than one-quarter of 1%). Upon revision to the door-to-door methodology, EurekaFacts garnered a response rate of 3.5% in the Washington D.C. metro area during the pilot of the methodology (15x that of the original response rate). Additionally, field teams during the pilot had face-to-face interaction with 20% of households contacted. Once an interviewer initiated the recruitment process, there was a 17% chance of participant cooperation that resulted in a completed interview. EurekaFacts is factoring in the recorded response rate and cooperation data of the pilot location into calculating the efforts for other metro areas and the study overall. Because of the overall lower response rate, more households need to be contacted for the initial pitch of the study; however, the revised methodology reduces the number of contacts made per residence, which reduces the overall burden per respondent.
7. The original sample selection of metro areas (AKA, primary sampling units) included each of the following 24 metro locations proportionally drawn (based on concentration of occupied households) from each of four U.S. Census regions. The Washington DC Metro area was not randomly selected for this effort but was instead a purposively selected metro area to test revisions to the sampling method mid-field for proof of concept. As others may remember, following great challenges experienced with the original 2018 sampling design using an address-based sampling approach, a new door-to-door (D2D) sampling method was proposed and approved by CPSC and OMB. To test feasibility of D2D methods for the SCOA survey, the Washington DC Metro was proposed and endorsed. The advantages of the Washington area included close and convenient data collection for successful monitoring, the ability to judge and react quickly to challenges, and cost containment measures, among other benefits.

   The research design and budget contracts for this survey effort did not include a pilot location for the testing of methods. A redesign was not anticipated. Only the 24 metro locations identified above were selected for sampling to constitute the N=1,185 nationwide proportionally representative interviews as approved under the study design and budget.

   Ultimately, the decision was made by CPSC and EurekaFacts to not consider the Washington metro as eligible for the SCOA survey (within the N=1,185 total completes) and instead treat this location as a pilot study only.[10] In turn, the survey is being completed in each of the originally selected 24 metro locations, while reducing the total nationwide sample size to N=1,055 (i.e., N=1,185 completes minus the N=130 interviews completed in the Washington Metro area). The number of expected completes has been redistributed in proportion to occupied housing unit counts for each of the 24 metro locations. These changes were made, in part, to complete the study in full within the contracted periods established by CPSC and National Fire Protection Association (NFPA), no later than fall 2022 and accounting for time lost for data collection

[10] CPSC SCOA Survey – Washington, DC Door-to-Door Pilot (April 3, 2020), EurekaFacts, Rockville, MD CPSC-Survey-Revised-DiagnosticReport_11_18_20206b6.pdf

attributable to a work stoppage for face-to-face interviewing during the COVID-19 pandemic.

To adjust the total sample selection nationwide, among the 24 metros, each metro area's expected sample size was reduced in proportion to its share of occupied housing units in the overall sample frame. For example, Los Angeles, CA (the largest metro area in the sample) had an original sample size expectation of N=205 based on 1,185 interviews. After recalibration, using a total nationwide sample size equal to 1,055 the new sample size expectation for Los Angeles, CA metro area equals N=183 completes. Providence, RI (one of the smallest metro areas) had an original sample size expectation of N=34 completes based on 1,185 total interviews. After recalibration, the new sample size expectation for the Providence, RI metro area equals N=30 completes.

Table 3. Calculation for adjustment in metro area sample sizes.

Formula for metro area sample sizes: (Solve for SampleN)	OHUs^ for each metro / Total OHUs all metros	=	SampleN / Total sample (N=1,055)
Los Angeles, CA Metro Area	62,942 / 363,111	=	**183** / 1,055
Providence, RI Metro Area	10,350 / 363,111	=	**30** / 1,055

^Occupied housing units (OHU).

Note that the changes listed here, and the details of the resulting administrative, technological, and sampling revisions, are incorporated throughout the text of the revised supporting statements A and B.

A.16. *Plans for tabulation and publication*

A.16.1 *Analysis Plan*

Prior to data analysis, EurekaFacts will complete data cleaning and a non-response analysis. The data cleaning process will include: identification and removal or re-coding of inconsistent responses and subsequent inclusion in the final data file and elimination of or recoding of respondents' choices when outside the ranges specified in the response categories. A non-response analysis will follow the data cleaning. The objective is to identify differences between respondents and non-respondents based on their demographics and other measurable characteristics to assess the representativeness of our sample necessary to allow statistical

inferences of the survey results. Weights will be applied to correct an over or under-representativeness of categories of the target audience in the final survey data.

The analysis will provide estimates of operability of smoke alarms and CO alarms, estimates of percentages of households as well as subgroups with installed of smoke alarms and CO alarms, estimates of the proportions of respondents demonstrating hazard awareness, and relevant behavior related to alarm use and smoke and CO hazards. Analysis will include evaluation of factors leading to inoperable alarms, types of housing relative to alarm operability conditions. Analysis will identify demographic groups that do not have operable smoke alarms and/or CO alarms, as well as demographic characteristics affecting alarms operability conditions.

The data analysis will include a tabulation of all survey questions, graphs, frequency distributions, and two-or-three way cross-tabulations of meaningful parameters to show similarities or differences among respondents. Analysis will be conducted using case-appropriate statistical, data-mining, and database modeling procedures. Analysis deliverables will include a final technical report describing the SCOA methodology and summarizing the results, findings, and conclusions. The report will include American Association for Public Opinion Research (AAPOR) indices for survey response rates, descriptive statistics on the demographic data, summary lists of open responses, and frequency distributions. A table of survey interviews and non-responses, in accordance with nationally recognized guidelines from AAPOR, will also be delivered.

A.16.2 *Publication Plan*

The Contractor will develop a technical report that will present a description of study design, research methods, summary of results, finding and conclusions.

The final technical report will be released by the Commission by disseminating the report on the agency's website and presentations at meetings and conferences related to the subject matter. The procedures to disseminate the information by the Commission, its staff, agents and representatives will be accordance with the law and Commission policy to ensure the information is accurate and not misleading. The agency will disseminate the findings when appropriate, strictly following the agency's "Guidelines for Ensuring the Quality of Information Disseminated to the Public".

In order to encourage dissemination of the findings, the report will be freely accessible on cpsc.gov. The work was prepared in the course of the author's official contracting duties with CPSC, thus Title 17 U.S.C. Section 105 provides that there can be no copyright in a United States government publication.

A.17. *Rationale for not displaying the expiration date for OMB approval*

No such exception is sought. The OMB survey number and expiration date will be displayed on the initial screener and informed consent forms to be used as a reference if needed.

A.18. *Exception to the certification statement*

No such exception is sought. These activities comply with the requirements in *5 CFR 1320.9*.