

Exploring the OSH Needs of Small Construction Business

Supporting Statement Part A

Request for Office of Management and Budget Review and Approval
for Federally Sponsored Data Collection

May 25, 2011

Thomas R. Cunningham, PhD

National Institute for Occupational Safety and Health

Education and Information Dissemination Division

Robert A. Taft Laboratories

4676 Columbia Parkway, MS C-10

Cincinnati, Ohio 45226

tcunningham@cdc.gov

513-533-8325

513-533-8560 (fax)

Table of Contents

A. Justification

1. Circumstances Marking the Collection of Information Necessary
2. Purpose and Use of Information Collection
3. Use of Improved Information Technology and Burden
4. Efforts to Identify Duplication and Use of Similar Information
5. Impact on Small Businesses or Other Entities
6. Consequence of Collecting the Information Less Frequently
7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5
8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

9. Explanation of Any Payments or Gifts to Respondents
10. Assurance for Confidentiality Provided to Respondents
11. Justification for Sensitive Questions
12. Estimates of Annualized Burden Hours and Costs
13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers
14. Annualized Cost to the Government
15. Explanation for Program Changes or Adjustments
16. Plans for Tabulation and Publication and Project Time Schedule
17. Reason(s) Display of OMB Expiration is Inappropriate
18. Exceptions to Certification for Paperwork Reduction Act Submission

Attachments

Attachment A. -- Authorization for the study

Attachment B -- 60 Day Federal Register Notice
Attachment C -- Interview Recruitment
Script

Attachment D -- Interview Opening Statement (Confidentiality and Consent)

Attachment E -- Interview Probes

Attachment F -- CDC Institutional Review Board Approval

Attachment G -- Public comment (60 day FRN)

A. Justification

1. Circumstance Making the Collection of Information Necessary

The Information Collection Request for *Exploring the OSH Needs of Small Construction Business* is classified as **New**.

Background

The mission of the National Institute for Occupational Safety and Health (NIOSH) is to promote safety and health at work for all people through research and prevention. In this capacity, NIOSH will administer in-depth interviews designed to assess perceptions and opinions among small construction business owners in the greater Cincinnati area. This information will guide the development of a survey to assess the occupational safety and health needs and motivators for seeking occupational safety and health (OSH) information among small construction business owners.

Exploring the OSH Needs of Small Construction Business is a four year field study whose overall goal is to identify the occupational safety and health (OSH) needs of small construction businesses (SCBs), and to inform methods that will successfully motivate SCB owners to seek OSH training relevant to their unique work situations. In addition, the *Exploring the OSH Needs of Small Construction Business* field study will lay the foundation for critical work to follow, aimed at disseminating OSH intervention materials to SCB owners which will enable and motivate them to enhance their OSH management efforts. The data gathered in this study regarding SCB owners' businesses'

specific training needs, motivational factors, and preferred information sources will be of significant practical value when designing and implementing future interventions.

As part of this project, a survey will be developed to assess SCB owners' businesses' specific training needs, motivational factors, and preferred information sources. The proposed in-depth interviews described here for which Office of Management and Budget review and approval is being requested are a critical step toward the development of this survey. Phase 1 of this project included interview development and revision. The primary goal of Phase 2 of this project is to gather key-informant perceptions and opinions among the target audience, small construction business owners in the greater Cincinnati area. Data gathered from in-depth interviews will guide the development of a survey to assess the occupational safety and health needs and motivators for seeking OSH information among small construction business owners. The questionnaire items that will be used to survey a larger sample of SCB owners in the subsequent phase of this study cannot be developed until after the completion of Phase 2. Therefore, permission to conduct additional surveys of SCB owners will be submitted as Phase 3, upon their completion.

Construction had the most fatal injuries of any industry sector, with 1,178 fatalities in 2006 (21% of total) (U.S. Dept. of Labor, 2008). More than 79% of construction businesses employ fewer than 10 employees (CPWR, 2007), and this establishment size experiences the highest fatality rate within construction (U.S. Dept. of Labor, 2008). The need for reaching this population with effective, affordable, and culturally appropriate training has been documented in publications and is increasingly becoming an institutional priority at NIOSH. Given the numerous obstacles which small

construction business owners face in effectively managing occupational safety and health (e.g., financial and time constraints), there is a need for identifying the most crucial components of occupational safety and health training. Additionally, previous investigations suggest a need for persuading small construction business owners to seek out occupational safety and health training (Lentz & Wenzl, 2006).

Established methods of training needs analysis (Holton, Bates, & Naquin, 2000) provide a framework for assessing the essential knowledge and skills for effectively managing the safety of small construction businesses. The Transtheoretical Model (Prochaska, et al., 2001) and The Theory of Planned Behavior (Ajzen, 1988, 1991) provide a useful theoretical foundation for understanding factors which influence health and safety behaviors. This study aims to gain understanding of the occupational safety and health training needs of the smallest construction businesses, and factors which influence small construction business owners' intentions to seek occupational safety and health information, as well as ideal channels for information dissemination. The information gained in this study will in turn inform the future development of messages aimed at persuading small construction business owners to seek occupational safety and health information tailored to their specific occupational safety and health training needs.

This study addresses the National Occupational Research Agenda (NORA) research priority area of *Small Business Assistance and Outreach*. In addition, it also involves the NIOSH industry sector area of *Construction*. This project addresses *Healthy People 2020* goals in the focus area of *Occupational Safety and Health*.

Researchers will use the data from this round of in-depth interviews to develop the core questionnaire items that will be used to assess the occupational safety and health

needs and motivators for seeking OSH information among small construction business owners. The overall goal of this project is to improve the understanding of small construction business OSH needs and drivers of OSH improvement efforts, as well as to develop recommendations for overcoming the barriers that have compromised the effectiveness of occupational health and safety programs among the smallest of construction businesses (10 or fewer employees). Although beyond the scope of this study, it is expected that improved use of occupational health and safety programs will lower rates of injuries and fatalities for workers.

Public Law 91-596, 91st Congress, S.2193, December 29, 1970, Section 20 (a)(1) of the Occupational Safety and Health Act (29 U.S.C. 669), enables CDC/NIOSH to carry out research relevant to the safety and health of workers (see Attachment A).

Privacy Impact Assessment

Overview of the Data Collection System - For purposes of reaching population *response saturation*, which means enough responses are gathered that no new response themes are generated, this interview will be administered to a sample of *approximately 30 owners of construction businesses with 10 or fewer employees from the Greater Cincinnati area*. The sample sizes are not based upon power analyses comparing expected group differences. Rather, the sample size is based upon recommendations related to qualitative interview methods, on the basis of the number of respondents needed to acquire *response saturation*, or no new response themes. Recommendations in the behavioral science literature as well as the experience of the research team suggest 25 respondents will be the maximum number required to achieve response saturation. Thus, a sample size of 30 should be more than adequate.

Participants for this data collection will be recruited with the assistance of contractors who have successfully performed similar tasks for NIOSH in the past. Participants will be provided with information about the purpose of the interview. They will also be told that whatever information they share will be secure (see Attachments C and D). In addition, they will be informed that they will be compensated for their time. Any contractor(s) used for recruitment will be registered with the Federalwide Assurance (FWA) and the Request to Allow an Outside Institution to rely on NIOSH HSRB will be filed. The interview questionnaire will be administered verbally to participants in English.

Paper copies of the interviews will be kept by the NIOSH research team in a locked cabinet in offices with locked doors. The responses will also be entered into a computer program which will be kept on a password protected computer and/or on CD's that will be stored in a locked cabinet in offices with locked doors. Only the investigators will have access to the data.

Items of information to be Collected – The data will be responses to a self-report interview questionnaire concerning occupational safety and health issues such as primary hazards of concern, current occupational safety and health activities, perceived benefits and barriers to occupational safety and health activities, and preferred sources of information (see Attachment E). No individually identifiable information is being collected.

Identification of Website and Website Content Directed a Children under 13 Years of Age

The Information Collection does not involve web-based data collection nor will participants be referred to any websites. All participants will be 18 years of age or older.

2. Purpose and Use of information Collection

A major obstacle to designing and assessing the impact of occupational safety and health interventions with small construction businesses is the lack of a rigorously validated questionnaire addressing the issues believed to be contributing to the occupational health disparities experienced by this group. In order to better understand some of the factors that may be contributing to the persistent occupational health disparities between smaller and larger construction business workers, NIOSH is developing a questionnaire that focuses on important occupational safety and health issues such as primary hazards of concern, current occupational safety and health activities, perceived benefits and barriers to occupational safety and health activities, and preferred sources of information. The data from these interviews will inform the later development of core questionnaire items that will be used to assess the occupational safety and health needs and motivators for seeking OSH information among small construction business owners. In addition, it will inform NIOSH's ongoing efforts to create occupational safety and health interventions targeting small business workers.

The results of this study will also be disseminated through peer reviewed journal articles and at academic and industry conferences. The information gathered by this project could be used by OSHA to determine guidelines for the development of appropriate training materials for small construction businesses. The results of this project will benefit construction workers by developing recommendations for increasing

the effectiveness of occupational safety and health outreach methods specifically targeted to small construction businesses. Although beyond the scope of this study, it is expected that improved use of occupational health and safety programs will lower rates of injuries and fatalities for workers.

If the research team did not have the information from this data collection it would lack any empirical basis for creating a survey to assess the occupational safety and health needs and motivators for seeking OSH information among small construction business owners called for in the subsequent phase of the project. In addition, the lack of data would prevent NIOSH from more effectively focusing its efforts to reduce the burden of occupational injuries and illnesses.

This data collection has been fully funded through internal NIOSH funds related to the National Occupational Research Agenda. A contract for the data collection recruitment will be left to a contractor in FY2011.

Privacy Impact Assessment Information

No Information in Identifiable Form (IIF) is being collected.

3. Use of Improved Information Technology and Burden Reduction

Interviews will be conducted by NIOSH researchers in settings familiar to the participants such as their local job site or office location. The interview questionnaire will be administered verbally to participants in English. The data collection will not use electronic respondent reporting for several reasons. Attempting to collect the data using a computer would only increase the response time and add an additional level of discomfort for the majority of the respondents. This will require the interviewer to read the items to many of the respondents and record their answers. Additionally, open-

response format does not lend itself to computer administration. Finally, it has been the experience of the researchers that survey administrators are much more successful if they go out into the community to collect data rather than having respondents come to them. Entering data via computer would require the data collectors to carry laptops with them which would present many logistical challenges related to data security. For these reasons it was determined that electronic responding would increase rather than decrease the burden for the vast majority of respondents.

4. Efforts to Identify Duplication and use of Similar Information

In the process of creating the current interview questionnaire the NIOSH researchers have conducted literature searches, consulted experts in the field and attended professional conferences addressing relevant topics. To date no interview instrument on the occupational safety and health needs and motivators for seeking OSH information among small construction business owners has been found. At best the literature provides some examples of qualitative studies that suggest possible reasons for the occupational health disparities for small construction businesses. The interview instrument reflects these speculations, however no one has developed a qualitative or quantitative instrument to address this problem. The use of this interview instrument will provide NIOSH with information essential to the development of a survey to assess the occupational safety and health needs and motivators for seeking OSH information among small construction business owners called for in subsequent phases of the study. It will also fill a hole in the professional literature by contributing qualitative data to a problem that has largely overlooked.

5. Impact on Small Businesses or Other Small Entities

Small businesses will be directly involved in this data collection as small construction business owners are the targeted participants. The questions have been held to the absolute minimum required for the intended use of the data.

6. Consequences of Collecting the Information Less Frequently

The proposed project requires the data to inform the creation of the survey to assess the occupational safety and health needs and motivators for seeking OSH information among small construction business owners. Without the data there would be no empirical basis to guide survey development and subsequent recommendations for interventions.

The data will be collected from the respondents one time only. There are no legal obstacles to reduce the burden.

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

This request complies with the regulation 5 CFR 1320.5

8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

A. A 60-day Federal Register Notice was published in the *Federal Register* on May 18, 2011, vol. 76, No. 96, pp. 28786-28787 (see Attachment B). There was one public comment received.

B. The following individuals have been repeatedly consulted regarding various aspects of interview questionnaire design and content in 2010 and 2011.

David Parker, MD, MPH
Occupational Medicine Specialist

Park Nicollet Institute

St. Louis Park, MN

952-993-8753

David.Parker@ParkNicollet.com

Mary Watters

Director of Communications

CPWR -- The Center for Construction Research and Training

8484 Georgia Avenue

Suite 1000

Silver Spring, MD 20910

301-495-8523

MWatters@cpwr.com

E. Scott Geller, PhD

Alumni Distinguished Professor

Virginia Polytechnic Institute and State University

Blacksburg, VA 24061

540-231-6223

esgeller@vt.edu

9. Explanation of Any Payment of Gift to Respondents

Contracts for subject recruitment and data collection for this study will be awarded to a contractor with experience in recruiting small construction business owners. Based upon consultation with the previous contractors it is anticipated that the participants will receive \$75 for their involvement in the study. This amount is consistent with the researchers' expectations based upon having conducted similar data collection activities with this target demographic in the past. This amount is estimated to be a reasonable token of appreciation in exchange for the estimated burden of 1.5 hours of interview participation, plus travel time to and from the interview site which could total as much as an additional 1.5 hours given the regional sampling frame. It is worth noting that although efforts will be made to schedule interviews at or near the participants' work location, it is possible that some participants will prefer to travel to a location other than

their work location, and thus may be burdened with additional travel time. An investigation of small construction business research recruitment strategies, which was part of a NIOSH-funded study, found a significant financial incentive (a 10% premium worker's compensation premium discount) was necessary for soliciting participation of small construction business owner-operators in the state of Kentucky for a similar time commitment, and these researchers also noted this particular target population is rather difficult to recruit given the extreme time pressures they experience (Kidd, Parshall, Wojcik, & Sruttmann, 2004). The researchers know of no other evidence of effective incentives for recruiting this target population for research participation, thus alternatives to financial incentives are likely not feasible for the current study. Given that the target population of small construction business owners are the sole managers of their businesses, this exceptional remuneration amount seems warranted for the current study. Approval for the remuneration amount has been granted by the Institutional Review Board of CDC.

10. Assurance of Confidentiality Provided to Respondents

Approval of this study by the Institutional Review Board of CDC was received March 3, 2011 (see Attachment F). No information in identifiable form will be collected from respondents (see Attachments C and D). Respondents will be asked to provide general demographic information such as age (but not birth date), education, number of employees, and business specialty at the beginning of the interview (see Attachment E). The survey will be administered only once to each respondent and therefore there will be no need to collect contact information for follow-up. The interview will be administered by NIOSH researchers. All data will be recorded on standard forms and belongs

exclusively to NIOSH. There is no distinction between the data collected and that data the NIOSH will retain.

Privacy Impact Assessment Information

No IIF is being collected

11. Justification for Sensitive Questions

No sensitive questions will be asked.

12. Estimates of Annualized Burden Hours and Costs

A. Reviews and trial administrations with representative members of the target audience were conducted in English as part of the development of the questionnaire. Based on this data it is estimated that the survey will take 90 minutes to complete.

Estimated Annualized Burden Hours

Type of Respondents	No. of Respondents	No. of Responses per Respondent	Average Burden per Response (in hours)	Total Burden (in hours)
SCBs	30	1	1.5	45
Total			45	

B. Respondents will be employed in a broad range of construction industries in some form of owner/management role and therefore the average hourly rate for all construction managers on private non-farm payrolls for May 2009 was used. According to the Bureau of Labor Statistics website the average hourly wage in

May 2009 was \$43.75. We have rounded this up to \$44 to simplify calculations (BLS, 2011).

Type of Respondent	No. Of Respondents	No. Responses per Respondent	Avg. Burden per Response (in hours)	Total Burden Hours	Hourly Wage Rate	Total Respondent Costs
SCBs	30	1	1.50	45	\$44.00	1980
Total						\$1980.00

13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers

A. There is no capital or start up costs for collection information in this project.

B. There is no cost to respondents for operation or maintenance in this project.

Respondents are not asked or expected to purchase any services.

14. Annualized Cost to the Government

RESEARCHER	Base And Benefits	Time on project	Cost for one year
Thomas Cunningham	112,251	20%	112,251 x .20 = \$22,451
			Total Salary Cost = \$22,451

2011

Contract for Data Collection Recruitment	\$25,000
Annualized salary and benefits (see above)	\$22,451
Travel to data collection sites	\$5,000
Total annualized cost to government	\$52,451

15. Explanation for Program Changes or Adjustments

This is a new data collection

16. Plans for Tabulation and Publication and Project Time Schedule

A.16 - 1 Project Time Schedule

Activity	Time Schedule
Recruitment materials provided to contractors	0-1 months after OMB approval
Complete Data collection	3 months after OMB approval
Analyses	6 - 18 months after OMB approval
Publication	18 - 24 months after OMB approval

Data Analysis

This interview questionnaire will be administered to a sample of approximately 30 owners of construction businesses with 10 or fewer employees from the Greater Cincinnati area. The sample size is not driven by power analyses aimed at identifying between group differences. Rather, the sample size is based primarily upon recommendations in the literature and prior experience of the current research team with similar qualitative data collection efforts among construction workers. It is not expected that all items included in this response elicitation draft form of the interview questionnaire will be included in the final version of the survey that will emerge as a result of this data collection. The results of these interviews will be analyzed to identify common sets of responses, and these responses will be used in the development of the survey mentioned above. The questionnaire items that will be used to survey a larger sample of SCB owners in the subsequent phase of this study cannot be developed until after the completion of Phase 2. The proposed sample size allows for the likely attainment of response saturation. That is, it is estimated that no new responses will be elicited following the completion of 25-30 interviews. Response saturation will be assessed by continuous data analysis rather than waiting until the end of data collection as is typically with quantitative research methods. In the case that response saturation has not occurred following the completion of 30 interviews, the recruitment contract includes a provision to recruit up to an additional 10 participants if necessary.

17. Reason(s) Display of OMB Date is Inappropriate

The OMB approval number and expiration will be displayed on all materials given to the contractor.

18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification.