

CPSC-I-10-0019
INTERAGENCY AGREEMENT
BETWEEN THE
U.S. CONSUMER PRODUCT SAFETY COMMISSION
AND THE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

I. INTRODUCTION

The U.S. Consumer Product Safety Commission, hereinafter referred to as CPSC, and the National Institute of Standards and Technology, hereinafter referred to as NIST, hereby agree that NIST, subject to the terms and conditions herein, shall perform the necessary research to begin development of a Standard Ignition Source (SIS) as a surrogate to the standard cigarette currently specified to address the flammability of mattresses and mattress pads, (16 CFR Part 1632), and upholstered furniture (draft proposed 16 CFR Part 1634). NIST shall provide the subsequent findings to CPSC. Completion of the program described in this Interagency Agreement (IAG) will allow CPSC staff to carry out its obligations in areas of regulatory development, compliance and enforcement.

II. TITLE

Identification of a Standard Surrogate Smoldering Ignition Source for Use in 16 CFR Part 1632, Standard for the Flammability of Mattresses and Mattress Pads, and 16 CFR Part 1634, Standard for the Flammability of Upholstered Furniture (Proposed). Short title: Standard Surrogate Smoldering Ignition Source for CPSC Standards.

III. BACKGROUND

The federal regulation for smoldering ignition of mattresses and mattress pads (16 CFR Part 1632) and a draft proposed rule for upholstered furniture (16 CFR Part 1634) specify a standard ignition source: an unfiltered cigarette with prescribed physical characteristics. Historically, this requirement has been satisfied with a conventional, unfiltered Pall Mall cigarette. In February 2008, RJ Reynolds ceased production of the conventional Pall Mall in order to comply with "fire-safe" cigarette legislation being adopted by states throughout the country.

CPSC staff purchased a stockpile of the conventional cigarettes that satisfy the prescriptive requirements in the spring of 2008 and contracted with NIST in FY2008 to develop a standard reference material (SRM) cigarette that is intended to closely model the conventional unfiltered Pall Mall's ignition strength. These SRM 1196 cigarettes will be a temporary solution. It is expected that the supply of these cigarettes will be exhausted in two to five years.

When the stockpile is exhausted, it may not be possible to replenish the supply, depending on market conditions and other factors affecting cigarette manufacturing. All stakeholders will then need to transition seamlessly to another standard ignition source, i.e., a surrogate

for the SRM 1196 cigarette. This surrogate smoldering ignition source could be another type of cigarette, or another material or device that achieves comparable smoldering performance to the SRM 1196 cigarette in the regulated products under laboratory test conditions.

IV. PURPOSE AND OBJECTIVE

The purpose of the research under this IAG is to begin development of a surrogate for the standard ignition source specified in the cited regulations (herein referred to as SRM 1196), a reproducible and commercially viable ignition source that would be available for many years to come. This might be a combustible item that would demonstrate smoldering ignition propensity equivalency on a wide variety of applicable soft furnishing substrates (e.g., mattress tickings and upholstery fabrics and fillings). A combustible product would need to be further developed into a Standard Reference Material (SRM). A re-usable heat-producing device would need to withstand ignition of the test assembly, require minimal to no repair after completion of a test, and be easily cleaned so as to provide consistent performance in a series of tests.

The objectives of the overall research program are to develop and validate a Standard Ignition Source (SIS) as a surrogate for the SRM 1196 and to provide specifications required to produce the SIS as long as such a material or device is required by the regulations.

CPSC has a bona fide need for these services. Individual tasks to be performed are severable from one another. The transfer of funds shall be from CPSC to NIST through the On-Line Payment Collection (OPAC) system.

V. STATEMENT OF WORK

The following tasks are expected to be components of the overall program needed to develop a SIS. Under this IAGs initial funding in FY-2010, NIST will complete Task A and Task B. For FY2011 and later Tasks C through I and any additional tasks and/or revisions to Tasks C through I will be funded, modified, and/or added into the IAG upon mutual agreement and the availability of funds.

- A. Literature Review: NIST will conduct a literature review of previous work performed, including work done at CPSC, to evaluate alternatives to cigarettes (i.e., electromechanical or combustible items) as potential surrogate smoldering ignition sources. Previous work done to characterize a cigarette's burning process will also be reviewed. A report with the information will be submitted to the CPSC staff.
- B. Potential Surrogates:
 1. NIST will identify a first set of potential surrogates, design the test substrates, and obtain all necessary materials and test fixtures to complete this task. The selection of candidates will consider ignition strength, propensity to ignite, commercial availability and other attributes discussed in consultation with CPSC staff.

2. NIST will perform an exploratory comparison of candidate surrogate performance to the SRM 1196 cigarettes on substrates representative of those regulated by CPSC, e.g., mattresses, mattress pads, and upholstered furniture substrates. The test plan, performance metrics and the substrates used for this comparison will be determined in consultation with CPSC staff.
- C. Flammability Performance: NIST will conduct research to identify the effects on ignition propensity of characteristics of the heat generation and heat transfer during use of the various candidate surrogate ignition sources that might differ from the SRM 1196 cigarette. These effects could arise from differences in peak temperature, movement rate of the "hot spot," or thermal contact with the substrate. The research results may lead to further reduction in the number of SIS candidate approaches and possibly modification of some of the remaining candidates. At the conclusion of this task, NIST will prepare a Technical Note for CPSC staff, for internal CPSC use only, for evaluation of candidate surrogate ignition sources that should continue to be studied.
 - D. Parametric Testing of Candidate Surrogates: Perform ignition experiments on substrates of a wide range of composition and thermal properties. The test configurations will be representative of those products regulated by CPSC, so this testing will provide information regarding the technical feasibility and commercial implications of the candidate surrogates for testing the subject regulated products. Some variation in the properties of the surrogates will be included. The test plan, performance metrics, and the substrates used for this task will be determined in consultation with CPSC staff.
 - E. Surrogate Specifications Development: Based on the NIST's recommendation and in consultation with CPSC staff, ignition performance data obtained, the best candidates for a surrogate will be chosen for final development. At this point, NIST will prepare a Technical Note for CPSC staff, for internal CPSC use only, on the research conducted to this point. The Note will include discussion of the following issues:
 - i. Operation: Address the complexity of operation, especially when multiple tests are conducted simultaneously.
 - ii. Practical use: Address practical capability for use in tests required in 16 CFR Part 1632 and proposed 16 CFR Part 1634.
 - iii. Decision Point: Recommendations for a SIS will be made, including any logistic changes to the CPSC standards for ease of use with the candidate surrogate ignition sources. If a combustible material is being considered, the report will include discussion of the projected feasibility of an SRM.

If the conclusions demonstrate the feasibility of the recommended candidates, the IAG will continue. Otherwise, the project will be terminated and a final report with all relevant data will be prepared.

- F. Certification Testing: NIST will develop and specify a test methodology to evaluate the smoldering flammability performance of the combustible item(s) or device(s). This testing should use test artifacts that are repeatable and reproducible.

- G. Feasibility: NIST will demonstrate that the surrogate(s) can be manufactured outside of a laboratory setting. A Technical Note detailing the findings of Tasks F and G will be submitted to the CPSC staff. If more than one candidate surrogate was previously chosen for further investigation, CPSC staff will select one based on this report.
- H. Interlaboratory Study: NIST will organize and coordinate an interlaboratory study of the selected SIS. Participating laboratories will be chosen in consultation with CPSC staff. Each participating laboratory will be provided with the specifications for the SIS and will fabricate (or purchase) and calibrate the devices necessary for the study. NIST will analyze the resulting data.
- I. Final Report: NIST will prepare for CPSC a final report including a summary of each task, all relevant data, and recommendations.

VI. NIST FURNISHED MATERIALS/EQUIPMENT

Under the initial funding available for this IAG, NIST agrees to furnish all necessary personnel, equipment, materials, services, and facilities to complete Tasks A and B, as described in Section V, except where noted.

VII. CPSC FURNISHED MATERIALS/EQUIPMENT

CPSC staff will provide guidance and assistance as needed, consistent with available staff resources and equipment, per section V.

VIII. CONFIDENTIALITY REQUIREMENTS

- a. All information reported to or otherwise obtained by CPSC or its agents under the Consumer Product Safety Act (CPSA) and provided to or shared with NIST, which contains or relates to a trade secret or other matter referred to in section 1905 of title 18, United States Code, or subject to section 552(b)(4) of title 5, United States Code, shall be held in confidence by NIST personnel.
- b. To the extent permitted by law, including the Freedom of Information Act, NIST agrees not to release the identity of any manufacturer of any product being tested or reviewed in conjunction with this IAG. These restrictions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by Executive Order No. 12958; section 7211 of title 5, United States Code (governing disclosures to Congress); section 1034 of title 10, United States Code, as amended by the Military Whistleblower Protection Act (governing disclosure to Congress by members of the military); section 2302(b)(8) of title 5, United States Code, as amended by the Whistleblower Protection Act (governing disclosures of illegality, waste, fraud, abuse or public health or safety threats); the Intelligence Identities Protection Act of 1982 (50 U.S.C. 421 *et seq.*) (governing disclosures that could expose confidential Government agents); and the statutes which protect against disclosure that may compromise the national security, including sections 641, 793, 794, 798, and 952 of title 18, United States Code, and section 4(b) of the Subversive Activities Act of

1950 (50 U.S.C. 783(b)). The definitions, requirements, obligations, rights, sanctions, and liabilities created by said Executive Order and listed statutes are incorporated into this Agreement and are controlling. Nothing in this Agreement bars disclosures to Congress or to an authorized official of an executive agency or the Department of Justice that are essential to reporting a substantial violation of law.

- c. All documents and other materials developed pursuant to this IAG shall have appropriate statements to indicate that the work was performed pursuant to the IAG by NIST; that the documents and other materials produced are the views of the staff or members (present or past) of NIST; and that although the documents and other materials may have been developed in conjunction with CPSC staff, the documents and other materials do not necessarily represent the views of the Consumer Product Safety Commission.
- d. Any publications of or publicity pertaining to the work performed under this Agreement shall include the following:
“This work was supported by the U.S. Consumer Product Safety Commission. The content of this publication has not been reviewed or approved by the Commission, and does not necessarily reflect the views of the Commission; similarly, mention of trade names, commercial products, or organizations does not imply endorsement by the Commission.” NIST will submit to CPSC Staff for non-binding comments any Technical Notes or other reports containing any data obtained in this project prior to any publication or report written for public dissemination. CPSC will have 30 days to provide comments. NIST will then have 30 days to respond to the comments and to prepare a final manuscript for publication.
- e. NIST will not publish any reports or make any external presentations on this project until the completion or termination of the project.
- f. NIST neither commits nor makes any obligation of funds pursuant to this agreement.

IX. REPORTING REQUIREMENTS.

NIST will provide monthly status reports, to be submitted to the project manager beginning one month after the start of the IAG and at the end of the performance period.

- i. Format – The reports must be e-mailed to the CPSC project officer at: lscott@cpsc.gov.
The reports shall be prepared in Word 2007 or older version.
- ii. Content – The reports must contain the following:
 - Status of project and new developments.
 - Problems and proposed solutions.
 - Changes in schedule.

X. PERIOD OF PERFORMANCE

1. The effective date of the first tasks under the IAG will be the date of signature by both parties. The period of performance shall begin on the effective date and shall not extend beyond 12 months from the effective date, or March 31, 2011, whichever is later.
2. Funding and completion of other tasks as noted in Section V shall be the subject of amendment(s) to this IAG.
3. This agreement may be modified or cancelled by mutual consent of CPSC and NIST.
4. This agreement will remain in place until terminated by the parties.

XI. DELIVERY OR PERFORMANCE

All deliverables required under the terms and conditions of this IAG shall be provided to the CPSC. The activities planned under this agreement are expressly subject to the availability of funds and other necessary resources to the parties. NIST neither commits nor makes any obligation of funds pursuant to this agreement. The following items shall be performed or delivered in accordance with the following schedule:

ITEM	DESCRIPTION OF ITEM	QUANTITY	DELIVERY & PERFORMANCE
1.	Status reports during Tasks A and B.	Not to exceed 12	Every thirty (30) days after start of IAG and continuing for 12 months or until the tasks are completed.
2.	Technical Note on Task A	Not to exceed 1	To CPSC for non-binding comments within at the completion of Task A.

XII. DISAGREEMENTS

In the event that CPSC and NIST have a disagreement arising under this IAG, the parties shall cooperatively seek to resolve the disagreement by themselves. If the disagreement cannot be resolved between them, the dispute shall be resolved pursuant to the Business Rules for Intragovernmental Transactions delineated in the Treasury Financial Manual, Vol.1, Bulletin 2007-03, Section VII (Resolving Intragovernmental Disputes and Major Differences).

If CPSC cancels this interagency agreement, NIST is authorized to collect costs incurred prior to cancellation of the order plus any termination costs.

XIII. SCHEDULE OF TASK COST AND PERFORMANCE

CPSC agrees to allow NIST to make adjustments as needed in the distribution of resources, as long as the total cost of the project is not increased and the project objectives are all met.

Initial tasks are as follows:

TASK	DESCRIPTION OF TASK	COST (\$ k)	TIME* (weeks)
Task A.	Literature Review	55	8 (8)
Task B	Potential Surrogates	140	27 (19)

*** The number of weeks is the actual time to be spent completing the Task. Some Tasks overlap in time. The parenthetical number of weeks is the time that the Task adds to the duration of the Project.**

XIV. LIAISON OFFICERS

a. NIST PROJECT OFFICER

Mr. Nelson P. Bryner
National Institute of Standards and Technology
Building and Fire Research Laboratory
Polymers Building, Building 224
Gaithersburg, MD 20899-8660
email: nbryner@nist.gov
Phone: (301) 975-6868

b. CPSC PROJECT OFFICER

Mrs. Lisa L. Scott
U.S. Consumer Product Safety Commission
Laboratory Sciences
10901 Darnestown Road
Gaithersburg, MD 20878
email: lscott@cpsc.gov
Phone: (301) 424-6421 x128

c. CPSC CONTRACTING OFFICER

Ms. Donna Hutton
U.S. Consumer Product Safety Commission
Directorate for Administration
Accounting Operations, Room 522
Bethesda, MD 20814
email: dhutton@cpsc.gov
Phone: (301) 504-7009

d. AGENCY PAYMENT OFFICER:

Ms. Deborah Peebles Hodge
U.S. Consumer Product Safety Commission
4330 East West Highway,
Bethesda, MD 20814
email: dhodge@cpsc.gov
Phone: (301) 504-7130

XV. COST AND TRANSFER OF FUNDS

The initial funding of this IAG is \$195 k, provided with CPSC FY 2010 funds for Tasks A and B as noted in Section V. Additional funding to complete Tasks C through I is subject to the availability of CPSC funds in FY2011 or later years.

NIST Administrative Point of Contact:
Ms. Sharon Rinehart
Administrative Officer, 866
Building and Fire Research Laboratory
Building 226, B206 / MS8602
Gaithersburg, MD 20899
email: sharon.rinehart@nist.gov
Telephone: (301) 975-5876

XVI. FUNDING AND ACCOUNTING DATA

I. Accounting Information:

Transfer From: CPCS for the first tasks:

Treasury Accounting Symbol (TAS)/Appropriation Code: 6100100
Date Funds Expire: 9/30/2010
Agency Location Code (ALC): 61-00-0001
Business Event Type Code (BETC): DISB
DUNS Number: 069287522
Funding Agency Code: 6100
Taxpayer ID Number (TIN): 520-97-8750
ACCS:
AMT: \$195 k
Acct. & Appropriation Data: 0100A10DPS 2010 2172500000 EXHR004200 255A0

To: NIST:

TAS: 13X4650
ALC: 13-06-0001
BETC: COLL
DUNS: 929956050
Funding Agency Code: 1341
NIST Taxpayer ID Number: 530-20-5706

XVII. AUTHORITIES:

FOR CPSC:

- Section 29(d) of the Consumer Product Safety Act, (15 U.S.C. 2078(d))

NIST possesses programmatic authority to conduct the requested work pursuant to the 15 USC 278(f), Fire Research.

NIST is achieving full cost recovery.

XVIII. SIGNATURE

Approved and Accepted for
National Institute of Standards and Technology

BY: A. Hamins
NAME: Anthony Hamins
TITLE: Division Chief
DATE: 8/23/10

Approved and Accepted for
U.S. Consumer Product Safety Commission

BY: Donna Hutton
NAME: Donna Hutton
TITLE: Contracting Officer
DATE: 8/23/2010

Memorandum for the Record

June 16, 2010

Subject: CPSC-I-10-0019

1. This interagency agreement is established between the Consumer Product Safety Commission (CPSC) and the National Institute of Standards and Technology (NIST). NIST shall perform the necessary research to begin development of a Standard Ignition Source (SIS) as a surrogate to the standard cigarette currently specified to address the flammability of mattresses and mattress pads.
2. This research is essential to the work of the agency because it will allow CPSC staff to carry out its obligations in areas of regulatory development, compliance and enforcement.
3. This interagency acquisition will be procured in accordance with Section 29(d) of the Consumer Product Safety Act, (15 U.S.C. 2078(d)).
4. NIST has unique and specialized staff knowledge, capabilities and facilities to perform this research which is not available at CPSC. This research cannot be obtained as conveniently or economically by contracting directly with a private source. CPSC will work closely with NIST staff during this project. The most effective method of obtaining this research is by obtaining it from NIST. Therefore, use of this interagency acquisition is determined to be in the best interest of the Government.



Donna Hutton
Contracting Officer

AUG 18 2010



UNITED STATES DEPARTMENT OF COMMERCE
Office of the General Counsel
Washington, D.C. 20230

MEMORANDUM FOR: Julie A. Weiblinger
Receivables Manager
National Institute of Standards and Technology

FROM: Barbara S. Fredericks 
Assistant General Counsel
for Administration

SUBJECT: Clearance of Reimbursable Agreement between NIST and the
Consumer Product Safety Commission
(NIST # 267, CPSC # REQ-4200-10-0047)

We clear the attached reimbursable agreement between the National Institute of Standards and Technology (NIST) and the Consumer Product Safety Commission (CPSC). The agreement contemplates that CPSC will transfer \$195,000 to NIST to undertake work on a project entitled "Standard Surrogate Smoldering Ignition Source for CPSC Standards." Performance is expected to begin in August 2010 and extend for one year. The funds expire on September 30, 2010.¹

Historically, CPSC conducted fire safety tests on mattresses and upholstered furniture by using a standard ignition source that met certain physical characteristics. This ignition source was a specific brand and type of cigarette that is no longer manufactured. CPSC requires NIST to develop a new (surrogate) ignition source that will reproduce the physical characteristics of the old. The work has been divided into nine stages (identified as A-I in the agreement). The first two stages: (A) literature review, and (B) identification of potential surrogates, are being funded here in full. The first stage has been described as having independent value to CPSC because the literature review will result in a useful summary of the technology to date. The second stage will result in a list (and some testing) of prototype ignition sources that CPSC could consider in undertaking future research.

The agreement provides that CPSC may request this work and transfer the funds under 15 U.S.C. §§ 2076(g) (authority to enter into contracts with governmental entities to conduct its programmatic activities); and 2078(d) (authority to utilize NIST resources and facilities on a reimbursable basis).

NIST may perform the work under 15 U.S.C. § 278(f), which permits NIST to perform and support research on all aspects of fire with the aim of providing scientific and technical

¹ We understand that performance on two out of nine itemized stages will commence immediately after funding is received, and both activities will be conducted simultaneously. We also understand that the two stages, while severable from the overall effort, are each non-severable.

knowledge applicable to the prevention and control of fires.

If you have any questions, please contact Alice McKenna of my staff at (202) 482-5234.

Attachment