## United States Government
### Intergency Agreement (IAA) - Agreement Between Federal Agencies
### General Terms and Conditions (GT&C) Section

<table>
<thead>
<tr>
<th>IAA Number</th>
<th>GPSC-4-15-0022</th>
<th>GT&amp;C #</th>
<th>0000</th>
<th>0000</th>
<th>Order #</th>
<th>Amendment/Mod #</th>
</tr>
</thead>
</table>

**DEPARTMENT AND/OR AGENCY**

   Servicing Agency Providing Products/Services: National Institute of Standards and Technology

| Address      | S Research Place
              | Rockville, MD 20850 |
|--------------|---------------------|
|              | 100 Bureau Drive    |
|              | Gaithersburg, MD 20899 |

2. Servicing Agency Agreement Tracking Number (Optional): 1505-733-06

3. Assisted Acquisition Agreement: Yes [x]  No

4. GT&C Action (Check action being taken):
   - [x] New
   - [ ] Amendment - Complete only the GT&C blocks being changed and explain the changes being made.
   - [ ] Cancellation - Provide a brief explanation for the IAA cancellation and complete the effective End Date.

5. Agreement Period: Start Date: [ ] Signature Date [ ] End Date: [ ]
   - Date or IAA Signature: MM-DD-YYYY
   - Effective cancellation date: MM-DD-YYYY

6. Recurring Agreement (Check One): A Recurring Agreement will continue, unless a notice to discontinue is received.
   - Yes [x] if Yes, is this an: Annual Renewal [ ]
   - Other Renewal [ ] State the other renewal period:
   - No [ ]

7. Agreement Type (Check One): Single Order IAA [x] Multi-Phase Order IAA [ ]

8. Are Advance Payments Allowed for this IAA (Check One): Yes [x] No [ ]
   If Yes is checked, enter Requesting Agency's Statutory Authority Title and Citation:
   NIST Organic Act, 15 USC Sections 273, 275b, and 278b

Note: Specific advance amounts will be captured on each related Order.

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United States Government
Interagency Agreement (IAA) - Agreement Between Federal Agencies
General Terms and Conditions (GT&C) Section

IAA Number: CPSC-1-15-0022
GT&C # - 0000 - 0000
Order # Amendment/Mod #

9. Estimated Agreement Amount (The Servicing Agency completes all information for the estimated agreement amount.)
(Optional for Assisted Acquisitions)

<table>
<thead>
<tr>
<th>Direct Cost</th>
<th>$180,000.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead Fees &amp; Charges</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total Estimated Amount</td>
<td>$180,000.00</td>
</tr>
</tbody>
</table>

Provide a general explanation of the Overhead Fees & Charges

10. STATUTORY AUTHORITY

a. Requesting Agency’s Authority (Check One)
Franchise  Revolving  Working  Economy Act  Other Fund  Fund  Capital Fund  (31 U.S.C. 1515/FAR 17.5)  Authority
☐  ☐  ☐  ☐  ☐


b. Servicing Agency’s Authority (Check One)
Franchise  Revolving  Working  Economy Act  Other Fund  Fund  Capital Fund  (31 U.S.C. 1515/FAR 17.5)  Authority
☐  ☐  ☐  ☐  ☐

Fill in Statutory Authority Title and Citation for Franchise Fund, Revolving Fund, Working Capital Fund, or Other Authority. 15 U.S.C. Sections 272(b)(8), (b)(10), and (b)(11) and (c)(8); NIST Organic Act, 15 USC Sections 273, 273b, and 278b (c) (5).

11. Requesting Agency’s Scope (State and/or list attachments that support Requesting Agency’s Scope.)


12. Roles & Responsibilities for the Requesting Agency and Servicing Agency (State and/or list attachments for the roles and responsibilities for the Requesting Agency and the Servicing Agency.)

13. Restrictions (Optional) (State and/or attach unique requirements and/or mission specific restrictions specific to this IAA). See attached Statement of Work titled, INTERAGENCY AGREEMENT BETWEEN THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, Title: Smoke Alarm Performance to Fire and Nuisance Source Tests.

14. Assisted Acquisition Small Business Credit Clause (The Servicing Agency will allocate the socio-economic credit to the Requesting Agency for any contract actions it has executed on behalf of the Requesting Agency.)

15. Disputes: Disputes related to this IAA shall be resolved in accordance with instructions provided in the Treasury Financial Manual (TFM) Volume I, Part 2, Chapter 4700, Appendix 10; Intergovernmental Business Rules.

16. Termination (Insert the number of days that this IAA may be terminated by written notice by either the Requesting or Servicing Agency.)

   30

   If this agreement is canceled, any implementing contract/Order may also be canceled, if the IAA is terminated, the agencies shall agree to the terms of the termination, including costs attributable to each party and the disposition of awarded and pending actions.

   If the Servicing Agency incurs costs due to the Requesting Agency’s failure to give the requisite notice of its intent to terminate this IAA, the Requesting Agency shall pay any actual costs incurred by the Servicing Agency as a result of the delay in notification, provided such costs are directly attributable to the failure to give notice.

17. Assisted Acquisition Agreements — Requesting Agency’s Organizations Authorized To Request Acquisition Assistance for this IAA. (State or attach a list of Requesting Agency’s organizations authorized to request acquisition assistance for this IAA.) See attached Statement of Work titled, INTERAGENCY AGREEMENT BETWEEN THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, Title: Smoke Alarm Performance to Fire and Nuisance Source Tests.

18. Assisted Acquisition Agreements — Servicing Agency’s Organizations authorized to Provide Acquisition Assistance for this IAA. (State or attach a list of Servicing Agency’s organizations authorized to provide acquisition for this IAA.)

19. Requesting Agency Clause(s) (Optional) (State and/or attach any additional Requesting Agency clauses.) CPSC requires monthly financial reports.
20. Servicing Agency Clause(s) (Optional) (State and/or attach any additional Servicing Agency clauses.)
NIST will be reimbursed for all costs incurred. No contractors will perform work under this agreement. No students or U.S. citizens working under a NIST financial assistance award made under the authority of 15 U.S.C. 278 g-1 will perform work under this agreement. No employees or agents of recipients working under a NIST financial assistance award will perform work under this agreement.

21. Additional Requesting Agency and/or Servicing Agency Attachments (Optional) (State and/or attach any additional Requesting Agency and/or Servicing Agency attachments.)
See attached Statement of Work titled, INTERAGENCY AGREEMENT BETWEEN THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, Title: Smoke Alarm Performance to Fire and Nuisance Source Tests

22. Annual Review of IAA
By signing this agreement, the parties agree to annually review the IAA if the agreement period exceeds one year. Appropriate changes will be made by amendment to the GT&C and/or modification to any affected Order(s).

AGENCY OFFICIAL
The Agency Official is the highest level accepting authority or official as designated by the Requesting Agency and Servicing Agency to sign this agreement. Each Agency Official must assure that the general terms and conditions are properly defined, including the stated statutory authorities, and that the scope of work can be fulfilled per this agreement.

The Agreement Period Start Date (Block 3) must be the same as or later than the signature dates.
Actual work for this IAA may NOT begin until an Order has been signed by the appropriate individuals, as stated in the instructions for Blocks 37 and 38.

23. Requesting Agency
Requesting Agency: Eddie Ahmad
Title: CPSC Contracting Officer
Telephone Number(s): (301) 504-7884
Fax Number: (978) 244-8640
Email Address: sahammad@cpsc.gov

Servicing Agency
National Institute of Standards and Technology
Anthony Hamlin
Chief, Fire Research Division
Telephone Number: 301-975-6598

SIGNATURE

Approval Date
United States Government
Interagency Agreement (IAA) – Agreement Between Federal Agencies
Order Requirements and Funding Information (Order) Section

IAA Number: CPSC-15-0022
GT&C # Order # Amendment/Mod # Servicing Agency’s Agreement Tracking Number (Optional) 1500-733-06

### PRIMARY ORGANIZATION/OFFICE INFORMATION

<table>
<thead>
<tr>
<th>Requesting Agency</th>
<th>Servicing Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Organization/Office Name</td>
<td>U.S. Consumer Product Safety Commission</td>
</tr>
<tr>
<td>Responsible Organization/Office Address</td>
<td>National Institute of Standards and Technology</td>
</tr>
<tr>
<td>5 Research Place Rockville, Maryland 20850</td>
<td>100 Bureau Drive MS 6002</td>
</tr>
</tbody>
</table>

### ORDER/REQUIREMENTS INFORMATION

25. Order Action (Check One)
- [ ] New
- [ ] Modification (Mod) – List affected Order blocks being changed and explains the changes being made. For Example, for a performance period mod, state new performance period for this Order in Block 27. Fill out the Funding Modification Summary by Line (Block 26) if the mod involves adding, deleting or changing funding for an Order Line.

- [ ] Cancellation – Provide a brief explanation for Order cancellation and fill in the Performance Period End Date for the effective cancellation date.

26. Funding Modification Summary by Line

<table>
<thead>
<tr>
<th>Line #</th>
<th>Line #</th>
<th>Line #</th>
<th>Total of All Other Lines (attach funding details)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Line Funding</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Cumulative Funding Changes From Prior Mods (addition (+) or reduction (-))</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Funding Change for This Mod</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>TOTAL Modified Obligation</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total Advance Amount (-)</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Net Modified Amount Due</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

27. Performance Period

For a performance period mod, insert the start and end dates that reflect the new performance period.

Start Date: [Insert Date]
End Date: [Insert Date] 10 months from effective date.

MM-DD-YYYY

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DEPARTMENT OF THE TREASURY
FINANCIAL MANAGEMENT SERVICE
Page 1 of 5
IAA Order

IAA Number CPSC-i-15-0022
GT&C #
Order # " 
Amendment/Mod # 
Servicing Agency's Agreement Tracking Number (Optional) 1505-733-06

23. Order Line/Funding Information

<table>
<thead>
<tr>
<th>Requesting Agency Funding Information</th>
<th>Servicing Agency Funding Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALC 61-60-0001</td>
<td>13-05-0001</td>
</tr>
</tbody>
</table>

Component TAS expired by 10/31/2015

<table>
<thead>
<tr>
<th>SP</th>
<th>ATA</th>
<th>AIB</th>
<th>BPOA</th>
<th>EPOA</th>
<th>A</th>
<th>MAIN</th>
<th>SUB</th>
</tr>
</thead>
<tbody>
<tr>
<td>061</td>
<td>2015</td>
<td>2015</td>
<td>0100</td>
<td>000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OR Current TAS Format 13X4692

BETC DISB
Object Class Code (Optional) TIN: 620978750
BFN DUNS: 062287522
EBN + 6 (Optional) EIN: 929950090
Treasury Code: 61-15-0100

Additional Accounting Classification/Information (Optional)

0100 A16C05E 0216 2168900000
EXH PO004002 255AS - $180,000.00

Project/Task: 733391-000
Owning Org: 30-73-0039-04-69-69-00

Requesting Agency Funding Expiration Date 09-30-2015

Requesting Agency Funding Cancellation Date 09-30-2020

Smoke Alarm Performance to Fire and Nuisance Source Tests

Project Number & Title

Description of Products and/or Services, Including the bona fide need for this order (state or attach a description of products/services, including the bona fide need for this order.)

See attached Statement of Work titled, INTERAGENCY AGREEMENT BETWEEN THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, Title: Smoke Alarm Performance to Fire and Nuisance Source Tests

North American Industry Classification System (NAICS) Number (Optional)

Breakdown of Reimbursable Line Costs

<table>
<thead>
<tr>
<th>Unit of Measure</th>
<th>Contract Cost</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>Unit Price</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>$180,000.00</td>
<td>$180,000.00</td>
</tr>
</tbody>
</table>

Servicing Fees $0.00

Obligated Cost $0.00

Overhead Fees & Charges $0.00

Advance for Line (-) $0.00

Net Total Cost $180,000.00

Assisted Acquisition Servicing Fees Explanation

Advance Line Amount (-) $0.00

Net Line Amount Due $180,000.00

Type of Service Requirements

☐ Severable Service  ☑ Non-severable Service  ☐ Not Applicable

DEPARTMENT OF THE TREASURY
FINANCIAL MANAGEMENT SERVICE
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IAA Order

<table>
<thead>
<tr>
<th>IAA Number</th>
<th>CPSC-1-15-0022</th>
<th>Servicing Agency's Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT&amp;C #</td>
<td></td>
<td>Tracking Number (Optional)</td>
</tr>
<tr>
<td>Order #</td>
<td></td>
<td>1505-733-05</td>
</tr>
<tr>
<td>Amendment/Mod #</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. Advance Information (Complete Block 29 if the Advance Payment for Products/Services was checked “Yes” on the GT&C.)

Total Advance Amount for the Order $180,000.00 [All Order Line advance amounts (Block 28) must sum to this total]

Revenue Recognition Methodology (according to SFFAS 7) (Identify the Revenue Recognition Methodology that will be used to account for the Requesting Agency’s expense and the Servicing Agency’s revenue)

- [ ] Straight-line – Provide amount to be accrued $180,000.00 and Number of Months 10
- [ ] Accrual Per Work Completed – Identify the accounting posting period:
  - Monthly per work completed & invoiced
  - [ ] Other – Explain other regular period (bi-monthly, quarterly, etc.)

30. Total Net Order Amounts $180,000.00

[All Order Line Net Amounts Due for reimbursable agreements and Net Total Costs for Assisted Acquisition Agreements (Block 28) must sum to this total.]

31. Attachments (State or list attachments.)

- [ ] Key projects and/or acquisition milestones (Optional except for Assisted Acquisition Agreements)

- [ ] Other Attachments (Optional)
  See attached Statement of Work titled, INTERAGENCY AGREEMENT BETWEEN THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, Title: Smoke Alarm Performance in Fire and Nuisance Source Tests

BILLING & PAYMENT INFORMATION

32. Payment Method (Check One) [Intra-governmental Payment and Collection (IPAC) is the Preferred Method.]

- [ ] Requesting Agency Initiated IPAC
- [ ] Servicing Agency Initiated IPAC
- [ ] Credit Card
- [ ] Other – Explain other payment method and reasoning

33. Billing Frequency (Check One)

[An invoice must be submitted by the Servicing Agency and accepted by the Requesting Agency BEFORE funds are reimbursed (i.e., via IPAC transaction)]

- [ ] Monthly
- [ ] Quarterly
- [ ] Other Billing Frequency (include explanation) Advance Payment

34. Payment Terms (Check One)

- [ ] 7 days
- [ ] Other Payment Terms (include explanation):

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DEPARTMENT OF THE TREASURY
FINANCIAL MANAGEMENT SERVICE
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35. Funding Clause/Instructions (Optional) (State and/or list funding clauses/instructions.)

N/A

36. Delivery/Shipping Information for Products (Optional)

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Name</td>
<td></td>
</tr>
<tr>
<td>Point of Contact (POC) Name &amp; Title</td>
<td></td>
</tr>
<tr>
<td>POC Email Address</td>
<td></td>
</tr>
<tr>
<td>Delivery Address/Room Number</td>
<td></td>
</tr>
<tr>
<td>POC Telephone Number</td>
<td></td>
</tr>
<tr>
<td>Special Shipping Information</td>
<td></td>
</tr>
</tbody>
</table>

APPROVALS AND CONTACT INFORMATION

37. PROGRAM OFFICIALS

The Program Officials, as identified by the Requesting Agency and Servicing Agency, must ensure that the scope of work is properly defined and can be fulfilled for this Order. The Program Official may or may not be the Contracting Officer depending on each agency's IAA business process.

<table>
<thead>
<tr>
<th>Requesting Agency</th>
<th>Servicing Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Arthur Lee</td>
</tr>
<tr>
<td>Title</td>
<td>Engineer</td>
</tr>
<tr>
<td>Telephone Number</td>
<td>(301) 667-2038</td>
</tr>
<tr>
<td>Fax Number</td>
<td>(301) 975-6856</td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:alex@cpsc.gov">alex@cpsc.gov</a></td>
</tr>
<tr>
<td>Signature</td>
<td></td>
</tr>
<tr>
<td>Date Signed</td>
<td></td>
</tr>
</tbody>
</table>

38. FUNDING OFFICIALS - The Funds Approving Officials, as identified by the Requesting Agency and Servicing Agency, certify that the funds are accurately cited and can be properly accounted for per the purposes set forth in the Order. The Requesting Agency Funding Official signs to obligate funds. The Servicing Agency Funding Official signs to start the work and to bill, collect, and properly account for funds from the Requesting Agency, in accordance with the agreement.

<table>
<thead>
<tr>
<th>Requesting Agency</th>
<th>Servicing Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>James Baker</td>
</tr>
<tr>
<td>Title</td>
<td>Budget Officer</td>
</tr>
<tr>
<td>Telephone Number</td>
<td>(301) 504-7575</td>
</tr>
<tr>
<td>Fax Number</td>
<td></td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:jbaker@cpsc.gov">jbaker@cpsc.gov</a></td>
</tr>
<tr>
<td>Signature</td>
<td></td>
</tr>
<tr>
<td>Date Signed</td>
<td></td>
</tr>
</tbody>
</table>

DEPARTMENT OF THE TREASURY
FINANCIAL MANAGEMENT SERVICE
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### CONTACT INFORMATION

**FINANCE OFFICE Points of Contact (POCs)**
The finance office points of contact must ensure that the payment (Requesting Agency), billing (Servicing Agency), and advance/accounting information are accurate and timely for this Order.

<table>
<thead>
<tr>
<th>39.</th>
<th>Requesting Agency (Payment Office)</th>
<th>Servicing Agency (Billing Office)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Debbie Young</td>
<td>Patricia Jackson</td>
</tr>
<tr>
<td>Title</td>
<td>Payment Officer</td>
<td>Operations Manager, Finance Division</td>
</tr>
<tr>
<td>Office Address</td>
<td>CPSC Accounts Payable Br, AMZ-160 PO Box 25710, Oklahoma City, OK 73125</td>
<td>100 Bureau Drive, MD 1620 Gaithersburg, MD 20899</td>
</tr>
<tr>
<td>Telephone Number</td>
<td>(405) 954-7487</td>
<td>301-975-4653</td>
</tr>
<tr>
<td>Fax Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:patricia.jackson@nist.gov">patricia.jackson@nist.gov</a></td>
<td></td>
</tr>
<tr>
<td>Signature &amp; Date (Optional)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ADDITIONAL Points of Contacts (POCs)** (as determined by each Agency)
This may include CONTRACTING Office Points of Contact (POCs).

| Name | Eddie Ahmad |
| Title | CPSC Contracting Officer |
| Office Address | 4330 East West Highway, Rm 523 Bethesda, MD 20814-4408 |
| Telephone Number | (301) 504-7884 |
| Fax Number | 301-975-9876 |
| Email Address | sharon.riehart@nist.gov |
| Signature & Date (Optional) | sharon.riehart@nist.gov |

| Name | Melissa Buford |
| Title | Supervisory General Attorney |
| Office Address | 4330 East West Highway Bethesda, MD 20814 |
| Telephone Number | 301-504-7637 |
| Fax Number | 301-975-2160 |
| Email Address | mbuford@cpsc.gov |
| Signature & Date (Optional) | urayne.knowles@nist.gov |

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**FMS Form 7600B**

DEPARTMENT OF THE TREASURY
FINANCIAL MANAGEMENT SERVICE
Page 8 of 5
Interagency Agreement between the
U.S. Consumer Product Safety Commission (CPSC)
and the
National Institute of Standards and Technology (NIST)

I. TITLE
Interagency Agreement (IAA) between the U.S. Consumer Product Safety Commission (CPSC) and the National Institute of Standards and Technology (NIST) for testing and analysis of smoke alarms/detectors.

The Consumer Product Safety Commission will reimburse funds to the National Institute of Standards and Technology for the purpose of accomplishing the work as set forth in the Statement of Work.

II. PURPOSE AND OBJECTIVE
The purpose of the project is to quantify the performance of commercially-available smoke alarms and detectors, to UL 217, 6th Edition, Single and Multiple Station Smoke Alarms fire tests and the polyurethane (PU) foam fire tests defined in UL’s July 11, 2014 proposal to UL 217/UL 268. The ability of the smoke alarms and detectors to avoid nuisance alarm(s) will also be evaluated. The information will assist CPSC staff in formulating strategies to promote improvement of smoke alarm performance.

The following objectives will be met at the completion of the project:

1. Characterize smoke alarm and detector test samples using NIST FE/DE apparatus.
2. Construct UL 217 Fire Test Room.
3. Evaluate the performance of current smoke-alarm technology to the current UL 217 fire tests.
4. Evaluate the performance of current smoke-alarm technology to the proposed PU foam fire tests.
5. Evaluate the performance of current smoke-alarm technology to nuisance sources.
6. Fully characterize test detectors and alarms in a consistent manner to facilitate comparisons.
7. Make all of the data collected as widely accessible as possible.

III. BACKGROUND
According to National Fire Protection Association (NFPA), there were 1,240,000 fires reported in the U.S. during 2013. There were an estimated 487,500 structure fires reported to fire departments in 2013, a slight increase of 1.5%, from a year ago. Of the structure fires, 387,000 were residential fires, accounting for 79.4% of all structure fires, and a slight increase of 1.6% from a year ago. Fires in the home (one- and two-family homes, including manufactured homes and apartments) resulted in 2,755 civilian deaths, an increase of 15.7% from a year ago. Home fire deaths account for 85% of all civilian deaths.

According to a telephone survey, 96-97% of U.S. households have at least one smoke alarm, yet in 2007-2011, smoke alarms were present in only three-quarters (73%) of all reported home
fires and operated in half (52%) of all reported home fires. The death rate per 100 reported fires was twice as high in homes without a working smoke alarm (1.18 deaths per 100 fires) as it was in home fires with this protection (0.53 deaths per 100 fires).

In 2014, UL proposed two new fire tests for UL 217, Single and Multiple Station Smoke Alarms (UL 217). The fire tests were smoldering and flaming PU foam. The proposal was defeated by the UL 217 Standards Technical Panel (STP). The proposal was resubmitted to UL 217 with revisions to the success criteria thresholds for the same smoldering and flaming PU foam tests. The proposals again were defeated.

IV. STATEMENT OF WORK

The purpose of this Interagency Agreement is to have NIST conduct performance testing of current smoke alarms and detectors according to Sections 44 to 46 of UL 217. The performance tests will also include the proposed smoldering and flaming PU foam tests and nuisance sources.

In NIST’s Large Scale Fire Facilities, NIST will construct a test room as specified in UL 217 Paragraph 44.6. The alarm responses and smoke properties (aerosol properties, combustion gases, heat, velocity, and video signatures) will be measured and recorded. The tests will characterize the test conditions at the alarms by collecting at a minimum concentrations of CO, CO₂, O₂, and HCN, smoke obscuration, temperature, humidity, smoke particle size and concentration. NIST will monitor and record the alarm status of current smoke alarms and detectors that use ionization, photoelectric, dual sensor, and multi-sensors.

Also, NIST will use test nuisance sources in the test room to monitor and record the alarm status of current smoke alarms and detectors that use ionization, photoelectric, dual sensor, and multi-sensors.

NIST will write a report on the comprehensive data set of fire and nuisance signatures of current smoke alarms and detectors. NIST agrees to furnish all necessary personnel, materials, services, and facilities to complete the objectives list in Section II.

The contemplated work consists of a series of tasks for which approximate budgets have been assigned as shown below. NIST reserves the right 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.

<table>
<thead>
<tr>
<th>Task</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acquire test detectors/alarms and conduct detector baseline calibration.</td>
<td>Months 1-2</td>
</tr>
<tr>
<td>The NIST project staff will investigate and collect a set of test alarms that are representative of the range of products currently sold. All test alarms will be initially characterized in NIST’s FE/DE apparatus to provide baseline data. Appropriate modifications may be made to the test alarms to facilitate the acquisition of useful data, and any modified alarms will be calibrated against unmodified devices to assure the modifications do not affect performance.</td>
<td>$15k</td>
</tr>
</tbody>
</table>
2. Construct UL 217 fire test room
   Test room will be constructed in accordance with UL 217 Paragraph 44.6 to allow similar testing.
   $20k
   Month 3

3. Evaluate performance to the current UL 217 fire tests.
   Smoke alarms and detectors acquired and modified (as necessary) in accordance with Task 1 will be evaluated to current UL 217 test Fires in Sections 44 to 46. Test alarms exposed to fire tests will be re-checked in the FE/DE between major tests to assure that such exposure did not alter the operational characteristics.
   $30k
   Month 4

4. Evaluate performance to the proposed PU foam fire tests.
   Smoke alarms and detectors acquired and modified (as necessary) in accordance with Task 1 will be evaluated to the proposed PU Foam Fire Test as outlined in the UL’s July 11, 2014 proposal to UL 217/UL 268. Test alarms exposed to fire tests will be re-checked in the FE/DE between major tests to assure that such exposure did not alter the operational characteristics.
   $45k
   Months 5-6

5. Evaluate the performance of current smoke-alarm technology to nuisance sources.
   Smoke alarms and detectors acquired and modified (as necessary) in accordance with Task 1 will be evaluated to the proposed nuisance tests as outlined in the UL proposal (TBD).
   $20k
   Month 7

6. Fully characterize test detectors and alarms for comparisons.
   Fully compare and analyze the data between smoke alarm samples and detector samples to type of fire tests and nuisance tests.
   $10k
   Month 8

7. Make all of the data collected as widely accessible as possible.
   Analyze data, model and prepare and write final test report. The data will be made available on a public web site for download.
   $40k
   Months 9-10

V. DURATION OF AGREEMENT (Period of Performance)
The period of performance shall begin on the date of last signature and shall not extend beyond ten (10) months. This agreement may be modified by mutual consent of CPSC and NIST.

VI. CONSULTATION

NIST will provide written reports and oral briefings to the CPSC staff and other sponsors as set forth below.

- Monthly progress reports including, but not limited to, project status, funding status, schedule, and logistic status.
- Data access in electronic form in several formats.
- Representative photographs and videos of the tests.
• NIST will produce a final technical report including, but not limited to, test setup, test data, data analysis, conclusions, and recommendations. The report shall be reviewed by each agency before being released to the public.

VII. GOVERNMENT-PROVIDED MATERIALS/EQUIPMENT

a. CPSC-furnished equipment/materials: None

b. NIST-furnished equipment/materials: Test equipment, testing facility, instrumentation, test samples, and consumables needed to meet the objectives.

c. Disposition of Equipment: As appropriate by NIST disposal procedures

VIII. GOVERNMENT AND PROVIDED LABOR

a. CPSC labor:
CPSC staff will work jointly with NIST designing the testing matrix and selecting the smoke alarm and detector samples.

b. NIST labor:
NIST staff will conduct the testing, analysis, and reporting.

IX. CONFIDENTIALITY REQUIREMENTS

A. All information reported to or otherwise obtained by the Commission or its agents under the Consumer Product Safety Act (CPSA) (and shared with or provided to NIST), which information 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 and kept secret by NIST personnel.

B. To the extent permitted by law, including the Freedom of Information Act, NIST agrees not to release the identity of the manufacturer of the product being tested (example: smoke alarms, heat detectors, sprinklers heads) encompassed by the subject of this IAA without the written consent of CPSC's Office of General Counsel.

C. All documents and other materials developed pursuant to this IAA shall have appropriate disclaimers to indicate the work was performed pursuant to the IAA by NIST; that the materials are the views of the staff or members (present or previous at time of dissemination) of NIST; that, although they may have been developed in conjunction with CPSC staff and sponsors, the materials do not necessarily represent the views of the United States Consumer Product Safety Commission and other sponsors.

X. DELIVERY OF PERFORMANCE

A. Testing - To be completed within 7 months after effective date of IAA.

B. Delivery of final report - Within 3 months after completion of the testing period.

C. Progress reports after the completion of each Task – Within 30 days of completion of the task

D. Test data in several formats – Within 3 months of completion of the testing period.