

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO. REQ-4000-16-0007	5. PROJECT NO. (If applicable)
6. ISSUED BY CONSUMER PRODUCT SAFETY COMMISSION DIV OF PROCUREMENT SERVICES 4330 EAST WEST HWY ROOM 523 BETHESDA MD 20814	CODE FMPS	7. ADMINISTERED BY (If other than Item 6)	CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ATTN KEANA SCOTT 100 BUREAU DRIVE MS 8665 BUILDING 224 ROOM A267 GAITHERSBURG MD 20899-8665		(x) 9A. AMENDMENT OF SOLICITATION NO.	9B. DATED (SEE ITEM 11)
CODE 929956050	FACILITY CODE	X 10A. MODIFICATION OF CONTRACT/ORDER NO. CPSC-I-15-0017	10B. DATED (SEE ITEM 13) 07/23/2015

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) Net Increase: \$650,000.00
0100A16DSE-2016-2370400000-EXHR004000-255A0

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Unilateral Modification FAR 43.103(b) - Funding Action

E. IMPORTANT: Contractor is not. is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

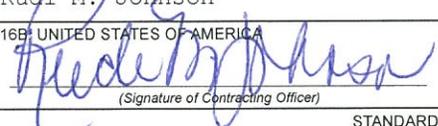
COR: Treye Thomas
Email: tthomas@cpsc.gov
Tel: 301-504-2560

Modification 0001 to Inter-Agency Agreement CPSC-I-15-0017 is hereby issued to reflect the following:

(1) To provide funding for order# 0002 in the amount of \$650,000.00 for project entitled Nanoparticle-Specific to Predict Consumer Exposure for the performance period of August 1, 2016 through December 31, 2017.

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Rudi M. Johnson
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED
16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 8-1-2016

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
 CPSC-I-15-0017/0001

PAGE 2 OF 2

NAME OF OFFEROR OR CONTRACTOR
 NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	(2) As a result of the above, this agreement is increased by \$650,000.00 from \$400,000.00 to \$1,050,000.00. (3) All other terms and conditions of the agreement remain unchanged and in full effect.				
0002	This Interagency Agreement (IAG) establishes an agreement between the Consumer Product Safety Commission (CPSC) and Engineering Laboratory, National Institute of Standards and Technology (NIST), U.S. Department of Commerce, through which the Consumer Products Safety Commission will pay NIST for development of computer models to predict airborne exposures to nanoparticles in occupied buildings associated with release from consumer products used indoors.	1	EA	650,000.00	650,000.00

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

IAA Number 15RA-CPSC-NIST - 0002 - _____ Servicing Agency's Agreement
 GT&C # Order # Amendment/Mod # Tracking Number (Optional) 1605-732-04

PRIMARY ORGANIZATION/OFFICE INFORMATION					
24.	Requesting Agency			Servicing Agency	
Primary Organization/Office Name	U.S. Consumer Product Safety Commission (CPSC)			National Institute of Standards and Technology (NIST)	
Responsible Organization/Office Address	4330 East West Highway Bethesda, MD 20814			100 Bureau Drive, MS 8602 Gaithersburg, MD 20899	
ORDER/REQUIREMENTS INFORMATION					
<p>25. Order Action (Check One)</p> <p><input checked="" type="checkbox"/> New</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> Cancellation – Provide a brief explanation for Order cancellation and fill in the Performance Period End Date for the effective cancellation date.</p>					
26. Funding Modification Summary by Line	Line # _____	Line # _____	Line # _____	Total of All Other Lines (attach funding details)	Total
Original Line Funding	\$	\$	\$	\$	\$0.00
Cumulative Funding Changes From Prior Mods [addition (+) or reduction (-)]	\$	\$	\$	\$	\$ 0.00
Funding Change for This Mod	\$	\$	\$	\$	\$ 0.00
TOTAL Modified Obligation	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Total Advance Amount (-)	\$	\$	\$	\$	\$ 0.00
Net Modified Amount Due	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
<p>27. Performance Period Start Date when signed End Date 12-31-2017</p> <p>For a performance period mod, insert the start and end dates that reflect the new performance period. MM-DD-YYYY MM-DD-YYYY</p>					

IAA Order

IAA Number 15RA-CPSC-NIST - 0002 - _____
 GT&C # _____ Order # _____ Amendment/Mod # _____

Servicing Agency's Agreement
 Tracking Number (Optional) 1605-732-04

28. Order Line/Funding Information										Line Number _____						
Requesting Agency Funding Information										Servicing Agency Funding Information						
ALC		61000001								13-06-0001						
Component TAS Required by 10/1/2014	SP	ATA	AID	BPOA	EPOA	A	MAIN	SUB	SP	ATA	AID	BPOA	EPOA	A	MAIN	SUB
			061	2016	2017		0100	000			013			X	4650	000
OR Current TAS format			61-0100							13X4650						
BETC			DISB							COLL						
Object Class Code (Optional)			TIN: 520978750													
BPN			069287522							929956050						
BPN + 4 (Optional)																
Additional Accounting Classification/Information (Optional)			0100A16DSE 2016 237040000 EXHR004000 255AO							\$650,000						
Requesting Agency Funding Expiration Date <u>09-30-2017</u> MM-DD-YYYY										Requesting Agency Funding Cancellation Date <u>09-30-2022</u> MM-DD-YYYY						
Project Number & Title Development of Nanoparticle-Specific Models to Predict Consumer Exposure																
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.)																
North American Industry Classification System (NAICS) Number (Optional) _____																
Breakdown of Reimbursable Line Costs										OR Breakdown of Assisted Acquisition Line Cost:						
Unit of Measure							Contract Cost		\$							
Quantity		Unit Price		Total			Servicing Fees		\$							
				\$			Total Obligated Cost		\$ 0.00							
Overhead Fees & Charges			\$				Advance for Line (-)		\$							
Total Line Amount Obligated			\$ 650,000.00				Net Total Cost		\$ 0.00							
Advance Line Amount (-)			\$ (650,000.00)				Assisted Acquisition Servicing Fees Explanation									
Net Line Amount Due			\$ 0.00													
Type of Service Requirements																
<input type="checkbox"/> Severable Service <input checked="" type="checkbox"/> Non-severable Service <input type="checkbox"/> Not Applicable																

IAA Order

IAA Number 15RA-CPSC-NIST - 0002 - _____ Servicing Agency's Agreement
GT&C # Order # Amendment/Mod # Tracking Number (Optional) 1605-732-04

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 \$ 650,000.00 [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 \$ 650,000.00 and Number of Months n/a
- Accrual Per Work Completed – Identify the accounting posting period:
 - Monthly per work completed & invoiced
 - Other – Explain other regular period (bimonthly, quarterly, etc.) for posting accruals and how the accrual amounts will be communicated if other than billed. _____

30. Total Net Order Amount: \$ _____
[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 project and/or acquisition milestones (Optional except for Assisted Acquisition Agreements)
See Attachment 1 - Statement of Work

- Other Attachments (Optional)

Attachment 1 - Statement of Work (SOW)

BILLING & PAYMENT INFORMATION

32. Payment Method (Check One) [Intra-governmental Payment and Collection (IPAC) is the Preferred Method.]
If IPAC is used, the payment method must agree with the IPAC Trading Partner Agreement (TPA)

- 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 Billing

34. Payment Terms (Check One)

- 7 days Other Payment Terms (include explanation): _____

IAA Order

IAA Number 15RA-CPSC-NIST - 0002 - _____ Servicing Agency's Agreement
 GT&C # Order # Amendment/Mod # Tracking Number (Optional) 1605-732-04

35. Funding Clauses/Instructions (Optional) (State and/or list funding clauses/instructions.)
 NIST will be reimburse for all cost incurred. No NIST 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. § 278g-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. Only NIST employees will perform work under this agreement.

36. Delivery/Shipping Information for Products (Optional)

Agency Name	
Point of Contact (POC) Name & Title	
POC Email Address	
Delivery Address /Room Number	
POC Telephone Number	
Special Shipping Information	

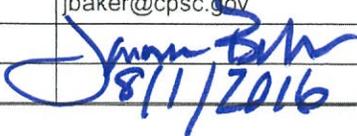
APPROVALS AND CONTACT INFORMATION

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.

	Requesting Agency	Servicing Agency
Name	Joanna Matheson	Steven Emmerich
Title	Toxicologist	Group Leader, Indoor Air Quality & Ventilation 
Telephone Number	(301) 987-2564	(301) 975-6459
Fax Number		
Email Address	jmatheson@cpsc.gov	steven.emmerich@nist.gov
SIGNATURE		
Date Signed		

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.

	Requesting Agency	Servicing Agency
Name	James Baker	Andrew Persily
Title	Budget Officer	Chief, Energy & Environment Division
Telephone Number	(301) 504-7575	(301) 975-6418
Fax Number		
Email Address	jbaker@cpsc.gov	andrew.persily@nist.gov
SIGNATURE		
Date Signed	8/11/2016	

IAA Order

IAA Number 15RA-CPSC-NIST - 0002 - _____ Servicing Agency's Agreement
 GT&C # Order # Amendment/Mod # Tracking Number (Optional) 1605-732-04

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.		
39.	Requesting Agency (Payment Office)	Servicing Agency (Billing Office)
Name	Debbie Young	Rayna Knowles
Title	Payment Officer	Group Leader, Reimbursable Group
Office Address	CPSC Accounts Payable Br, AMZ-160 PO Box 25710, Oklahmoa City, OK 73125	NIST Finance Division, 100 Bureau Drive Mail Stop 1624, Gaithersburg, MD 20899
Telephone Number	(405) 954-7467	(301) 975-5183
Fax Number		(301) 975-8943
Email Address	debbie.j.young@faa.gov	urayna.knowles@nist.gov
Signature & Date (Optional)		
40. ADDITIONAL Points of Contacts (POCs) (as determined by each Agency)		
This may include CONTRACTING Office Points of Contact (POCs).		
	Requesting Agency	Servicing Agency
Name	Rudi M. Johnson	Dawn Hurley
Title	Contracting Officer	Administrative Officer
Office Address	4330 East West Highway Bethesda, MD 20814-4408	100 Bureau Drive, MS 8602 Gaithersburg, MD 20899-8602
Telephone Number	(301) 504-7028	(301) 975-3408
Fax Number		
Email Address	rmurray-johnson@cpsc.gov	dawn.hurley@nist.gov
Signature & Date (Optional)	<i>Rudi M. Johnson</i> 8-1-2016	
Name		Mitchell Channell
Title		Reimbursables Group
Office Address		NIST Finance Division, 100 Bureau Drive Mail Stop 1624, Gaithersburg, MD 20899
Telephone Number		(301) 975-6929
Fax Number		
Email Address		mitchell.channell@nist.gov
Signature & Date (Optional)		
Name		
Title		
Office Address		
Telephone Number		
Fax Number		
Email Address		
Signature & Date (Optional)		

INTERAGENCY AGREEMENT BETWEEN THE
U.S. CONSUMER PRODUCT SAFETY COMMISSIONS AND THE
ENGINEERING LABORATORY
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
U.S. DEPARTMENT OF COMMERCE

1. TITLE

Development of Nanoparticle-Specific Models to Predict Consumer Exposure
(Short Title- CPSC NIST Nanoparticle Exposure Models)

2. PURPOSE

This Interagency Agreement (IAA) establishes an agreement between the Consumer Product Safety Commission (CPSC) and Engineering Laboratory, National Institute of Standards and Technology (NIST), U.S. Department of Commerce, through which the Consumer Products Safety Commission will pay NIST for development of computer models to predict airborne exposures to nanoparticles in occupied buildings associated with release from consumer products used indoors. In addition, this work will document protocols to characterize nanoparticles released from surface coatings associated with flooring finishes, interior paints, and similar products. The overall goal of this work is to provide methods and data to assess such releases, as well as to assist in estimating occupant exposure, in order to support the development of strategies to manage and mitigate these exposures.

3. BACKGROUND

Polymer coatings are commonly used to protect, enhance, or decorate wood, plastic and metal products used in homes and other buildings, including flooring finishes and interior paints. However, the coatings and the surfaces they are applied to are subject to scratching, abrasion, and chipping during manufacture, shipping and use. Nanoparticles (particles having at least one dimension smaller than 100 nanometers) are increasingly being added to coating formulations to prevent such damage as well as to enhance properties such as microbial and mildew resistance. Because of their small size and large surface area, nanomaterials may exhibit different physical, chemical, and transport behaviors in the human body and the environment. Research in recent years has indicated that nanoparticles may be potentially harmful to human health and the environment. Such concerns could present roadblocks to innovation and commercialization of nanotechnology.

Current research on the health effects of nanoparticles is focused on human and environmental exposure during manufacturing. However, the release of nanoparticles from

flooring finishes, interior paints and other products over their service life, and the resulting exposure of building occupants, potentially poses greater risks than those encountered during manufacture. This is true due to: 1) the large population of general building occupants relative to those involved only in manufacturing; 2) the large amount of surface area of interior walls and floorings in residential and commercial buildings, and 3) human exposure to these particles is continuous over the entire service life of the nanoparticle-containing products. Flooring products are of particular concern for young children who spend more time on the floor and, therefore, have greater opportunities for exposure. In addition to airborne nanoparticles, nanoparticles that are accumulated on surfaces may potentially pose a health hazard. Despite such serious potential risks, little information is available on the in-service release, surface accumulation, transport, and exposure of nanoparticles from flooring finishes and interior paints. The lack of such data severely hinders the ability to intelligently assess and manage the potential harmful effects of nanoparticle release from these large-volume sources.

Under previous interagency agreements between CPSC and NIST, NIST developed benchtop experimental protocols to study the effects of abrasion on nanoparticle releases from flooring finishes and interior paint. Experiments were then conducted in which samples were subjected to a Taber abrasion test per ASTM D4060 as well as using a high-speed sanding tool. The number of released nanoparticles was subsequently measured, as well as the particle size distribution, morphology, and chemical composition of nanoparticles released into the air and left on the coated surfaces. Since this work started, the need for better tools to predict airborne exposure to nanoparticles has been identified as important in understanding the results of these measurements and their potential impacts on building occupants. Current indoor air quality models allow the prediction of airborne particle levels, but those models do not consider mass transport mechanisms that are specific to nanoparticles. An airborne exposure calculation tool has been developed under previous agreements between CPSC and NIST, but that tool is limited by these current limitations in existing indoor air quality models. In addition, previous work at NIST has helped to identify the capabilities and limitations of current measurement technologies for evaluating nanoparticles released by abrasion processes. The knowledge gained in this effort needs to be disseminated to support the interpretation of such measurements by researchers and other stakeholders in the field.

4. AUTHORITY

The authorities for this agreement are:

FOR CPSC:

CPSC's programmatic authority includes:

Section 27 (g) of the Consumer Product Safety Act (15 U.S.C. 2076(g)), which authorizes the CPSC to enter into contracts with governmental entities for the conduct of activities authorized by the Act.

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

CPSC shall, to the maximum extent practicable, utilize the resources and facilities of the National Institute of Standards and Technology on a reimbursable basis, to perform research and analyses related to risks of injury associated with consumer products (including fire and flammability risks), to develop test methods, to conduct studies and investigations, and to provide technical advice and assistance in connection with the functions of the Commission.

FOR NIST:

This funding is proper pursuant to the NIST Organic Act. 15 U.S.C. § 273, 275b, and 278b, which collectively authorize NIST to exercise its functions for other Federal agencies and to be reimbursed or advanced funds based on the actual costs or fixed prices or costs.

NIST possesses programmatic authority to conduct the requested work pursuant to 15 U.S.C. § 272(b)(8), (b)(10), and (b)(11) and (c)(8), which authorize NIST to develop fundamental methods for testing equipment and systems; to cooperate with other departments and agencies of the Federal Government in establishing standard practices, codes, specifications and voluntary consensus standards; and to advise government and industry on scientific and technical problems; and study and develop fundamental scientific understanding and improved measurement, analysis, synthesis, processing, and fabrication methods for chemical substances and compounds, ferrous and nonferrous metals, and all traditional and advanced materials, including processes of degradation.

5. COST AND TRANSFER OF FUNDS

The U.S. Consumer Product Safety Commission will transfer **\$650,000** to NIST as reimbursement for undertaking the activities contemplated by this agreement. This transfer is to be made in advance.

The funds will be allocated within NIST as follows:

Indoor Air Quality and Ventilation Group	
Labor, including all overhead	\$475K
Documents and materials to support software development	\$25K
Polymeric Materials Group	
Labor, including all overhead	\$150K

NIST is achieving full cost recovery.

6. STATEMENT OF WORK

Work to be undertaken and deliverables to be provided:

- a. Identify physical models of airborne nanoparticle transport

Following on the previous efforts funded by CPSC, NIST will identify physical models of airborne nanoparticle transport for use in computer simulations. This work will involve a review of published literature as well as discussions with experts in the field of aerosol transport physics to identify physical models that account for the unique size, composition and shape of nanoparticles as they impact their fate and transport in building airflow systems. These models will be evaluated in terms of their physical reasonableness, prior validation and compatibility with the CONTAM airflow and contaminant transport model.

b. Implementation of airborne nanoparticle transport models in computer modeling tool

Following on the findings of Task a, NIST will implement selected nanoparticle transport models into a computer modeling tool developed under a previous agreement between CPSC and NIST (see Section 6b of CPSC-I-14-0013). This tool allows users to estimate occupant exposure to airborne nanoparticles based on the following inputs: particle size, particle emission rate, resuspension parameters and information on the building or space being considered. The calculations employ the multizone CONTAM engine in the background but a simpler user interface is used for entering inputs and displaying the results, with many inputs based on default values to make the tool more accessible to a wider group of users. Models will be added to the degree that the agreement resources allow, with the expectation that additional models will be added, tested and documented under future agreements.

c. Document protocols for measuring of airborne nanoparticles released by abrasion

This task will document in the form of protocols and other guidance for making measurements of airborne nanoparticle release associated with the abrasion of nano-coatings in environmental chambers. These protocols will describe instrumentation, techniques, and key experimental challenges identified under previous agreements between CPSC and NIST, NIST performed measurements of airborne nanoparticle release associated with the abrasion of nano-coatings in environmental chambers. This work was conducted in order to identify measurement methods for use by industry and others to quantify airborne release rates from these materials in ventilated spaces. The development and use of these methods provided important insight to the field.

d. Document protocols for characterization of nanoparticles released by abrasion

This task will document these various measurement procedures in the form of protocols and other guidance for making these measurements, which will include a discussion of the advantages and disadvantages of the different approaches identified under previous agreements between CPSC and NIST, for which NIST performed measurements of nanoparticle release associated with the abrasion of nano-coatings using a number of different surface characterization and particle analysis techniques. This work was conducted in order to identify measurement methods for use by industry and others to characterize the size, composition and morphology of nanoparticles generated by the abrasion of these materials. This experimental work was very helpful in understanding the capabilities and limitations of the methods

employed, e.g., TGA, SEM, EDX and ICP.

- e. Collaborate with other federal agencies on improving particle transport dynamics and other factors in the new CPSC-NIST nano-specific model.

NIST will work with other federal partners (e.g., EPA, NIOSH) to identify approaches to integrating indoor particle transport simulation tools developed at NIST with those developed at other agencies, including EPA's exposure calculation MCCEM and SHEDS tools. This collaborative effort will involve each group understanding the capabilities of the others' models, and defining and then implementing model and data integration approaches. These collaborations will result in an updated CPSC-NIST nano-specific model.

- f. Final Report

NIST will prepare a final report containing the results of tasks a through (e) above, including the updated CPSC-NIST nano-specific model.

Status reports will be delivered to CPSC on September 30, 2016 and September 30, 2017.

7. SCHEDULE

Months 1-4

Interactions with EPA to identify mechanisms to bring physical models of airborne nanoparticle transport into exposure tools.

Months 1-6

Identification of enhanced physical models of airborne nanoparticle transport.

Months 4-8

Implementation of selected physical models into CONTAM-based modeling tool.

Months 6-12

Integration of nanoparticle transport models into exposure tools.

Months 1-10

Documentation of airborne measurement and nanoparticle characterization protocols.

Month 12-16.

Preparation of final report

NIST will provide CPSC with monthly financial reports.

8. NIST EMPLOYEES

No NIST 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. § 278g-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. Only NIST employees will perform work under this agreement.

9. DURATION OF AGREEMENT AND AMENDMENTS

This agreement will become effective when signed by the parties. The agreement will terminate on December 31, 2017, but may be amended at any time by mutual written consent of the parties.

10. TERMINATION AND CANCELLATION CLAUSE

Any party may terminate this agreement by providing 60 days written notice to the other party. If the Consumer Products Safety Commission terminates the agreement, NIST is authorized to collect costs incurred prior to cancellation of the order plus any termination costs, up to the total value of the agreement. NIST is achieving full cost recovery. However, CPSC shall not be responsible to NIST for costs associated with actions that stem from errors in performing the tasks or responsibilities assigned to NIST.

11. SEVERABILITY

This service is non-severable. CPSC will not receive a benefit from the (work) if the entire project is not completed, and will realize the benefit when we receive the final project report from NIST.

12. RESOLUTION OF DISAGREEMENTS

Disputes related to this agreement shall be resolved in accordance with instructions provided in the Treasury Financial Manual (TFM) Volume I, Intragovernmental Business Rules Bulletin, available on the TFM Web site at <http://www.fms.treas.gov/tfm/vol1/bull.html>.

12. CONTACTS

The contacts of each party to this agreement are:

NIST ADMINISTRATIVE CONTACT

Dawn Hurley
Administrative Officer Div 732
100 Bureau Drive MS 8602
Gaithersburg, MD 20899-8602
(301) 975-3408
(301) 975-4032 FAX
dawn.hurley@nist.gov

NIST PROJECT OFFICER

W. Stuart Dols
Mechanical Engineer
National Institute of Standards and Technology
100 Bureau Drive, MS 8633
Gaithersburg, MD 20899
(301) 975-5860
(301) 975-4409 FAX
wsdols@nist.gov

NIST FINANCIAL POINT OF CONTACT

Rayna R. Knowles
Group Leader, Reimbursable Group, NIST Finance Division
100 Bureau Dr. Stop 1624
Gaithersburg, MD 20899-1624
(301) 975-5183
(301) 975-8943 FAX
urayna.knowles@nist.gov

NIST FINANCIAL REPORTING CONTACT

Mitchell Channell
Reimbursables Group, Finance Division
100 Bureau Drive, Stop 1624
Gaithersburg, MD 20899-1624
(301) 975-6929
mitchell.channell@nist.gov

CPSC COR AND FINANCIAL REPORTING CONTACT

Treye Thomas, Ph.D.
U.S. Consumer Product Safety Commission
Office of Hazard Identification and Reduction
4330 East West Highway
Bethesda, MD 20814
(301) 987-2560
(978) 967-8401 FAX
tthomas@cpsc.gov

Joanna Matheson, PhD
U.S. Consumer Product Safety Commission
Health Sciences Directorate
5 Research Place
Rockville, MD 20850
(301) 987-2564
(978) 987-2560 FAX
jmatheson@cpsc.gov

CPSC FINANCIAL POINT OF CONTACT

Priscila Susi, Director
U.S. Consumer Product Safety Commission

Division of Financial Services
4330 East West Highway
Bethesda, MD 20814
(301) 504-7566
psusi@cpsec.gov

CPSC PAYMENT OFFICE

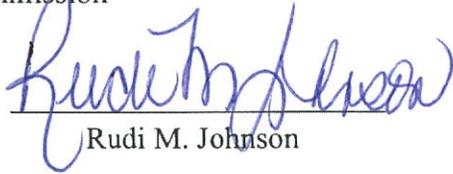
CPSC Accounts Payable Branch, AMZ-160
PO Box 25710
Oklahoma City, OK 73125

AGENCY PAYMENT OFFICER

Debbie Young, Agency Payment Officer
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The parties agree that if there is a change regarding the information in this section, the party making the change will notify the other party in writing of such change.

Approved and Accepted for
Consumer Product Safety
Commission

BY: 
Rudi M. Johnson

TITLE: Contracting Officer

DATE: 8-1-2016

Approved and Accepted for National
Institute of Standards and Technology

BY: _____
Andrew Persily

TITLE: Chief, Energy and
Environment Division

DATE: _____