

**ORDER FOR SUPPLIES OR SERVICES**

PAGE OF PAGES

1 2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1 DATE OF ORDER 08/12/2016		2 CONTRACT NO. (if any) CPSC-I-16-0021		6 SHIP TO	
3 ORDER NO		4 REQUISITION/REFERENCE NO. REQ-4000-16-0005		a NAME OF CONSIGNEE CONSUMER PRODUCT SAFETY COMMISSION	
5 ISSUING OFFICE (Address correspondence to) CONSUMER PRODUCT SAFETY COMMISSION 4330 EAST WEST HIGHWAY BETHESDA MD 20814				b STREET ADDRESS OFFICE OF HAZARD ID & REDUCTION 5 Research Place	
c CITY Rockville		d STATE MD	e ZIP CODE 20850		
7 TO NICOLLE S TULVE PHD				f SHIP VIA	
a NAME OF CONTRACTOR ENVIRONMENTAL PROTECTION AGENCY				8 TYPE OF ORDER	
b COMPANY NAME				<input checked="" type="checkbox"/> a PURCHASE	
c STREET ADDRESS OFFICE OF RESEARCH AND DEVELOPMENT NATIONAL EXPOSURE RESEARCH LAB 109 TW ALEXANDER DRIVE MD-E205-04				REFERENCE YOUR:  Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any including delivery as indicated.	
d CITY RESEARCH TRIANGLE PARK		e STATE NC	f ZIP CODE 27711		
9 ACCOUNTING AND APPROPRIATION DATA See Schedule				10 REQUISITIONING OFFICE CONSUMER PRODUCT SAFETY COMMISSION	

11 BUSINESS CLASSIFICATION (Check appropriate box(es))					12 F O B POINT
<input type="checkbox"/> a SMALL	<input type="checkbox"/> b OTHER THAN SMALL	<input type="checkbox"/> c DISADVANTAGED	<input type="checkbox"/> d WOMEN-OWNED	<input type="checkbox"/> e HUBZone	
<input type="checkbox"/> f SERVICE-DISABLED VETERAN-OWNED	<input type="checkbox"/> g WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM	<input type="checkbox"/> h EDWOSB			

13. PLACE OF		14. GOVERNMENT B/L NO		15. DELIVER TO F O B. POINT ON OR BEFORE (Date)		16. DISCOUNT TERMS	
a INSPECTION	b ACCEPTANCE					Net 30	

17. SCHEDULE (See reverse for Rejections)

ITEM NO (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 029128894 COR: Joanna Matheson PHONE: (301) 987-2564 EMAIL: jmatheson@cpsc.gov  THE CONTRACTOR SHALL PROVIDE THE FOLLOWING Continued ...					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO		17(h) TOTAL (Cont pages)
	21. MAIL INVOICE TO						
	a NAME CPSC Accounts Payable Branch						\$250,000.00
	b. STREET ADDRESS (or P.O. Box) AMZ 160 P.O. Box 25710						\$250,000.00
c. CITY Oklahoma City		d STATE OK	e ZIP CODE 73125				17(i) GRAND TOTAL

22 UNITED STATES OF AMERICA BY (Signature)			23 NAME (Typed) Kim Miles TITLE CONTRACTING/ORDERING OFFICER		
--	--	--	--	--	--

**ORDER FOR SUPPLIES OR SERVICES  
SCHEDULE - CONTINUATION**

PAGE NO

2

**IMPORTANT** Mark all packages and papers with contract and/or order numbers

DATE OF ORDER  
08/12/2016

CONTRACT NO  
CPSC-I-16-0021

ORDER NO

ITEM NO (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>SERVICES TO THE CONSUMER PRODUCT SAFETY COMMISSION IN ACCORDANCE WITH THE ATTACHED TERMS AND CONDITIONS: Accounting Info: 0100A16DSE-2016-2370400000-EXHR004000-255A0</p> <p>INTERAGENCY AGREEMENT (IA) BETWEEN THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY for the Evaluation of CPSC Wipe Method and Exposure Estimate to Nanomaterials in Surface Applications: Surface Coating.</p> <p>Period of Performance: 06/01/2016 to 05/31/2018</p>	1	EA	250,000.00	250,000.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$250,000.00

 <p style="text-align: center;">United States Environmental Protection Agency Washington, DC 20460</p> <p style="text-align: center;"><b>Interagency Agreement/ Amendment</b></p> <p style="text-align: center;"><b>Part 1 - General Information</b></p>	1. EPA IA Identification Number RW-061-92460201 - 0		2. Funding Location by Region EPA HQ						
	3. Other Agency IA ID Number (if known) CPSC-I-16-0021		4. Awarding Office IASSC East						
	5. Type of Action New		6. IA Specialist: Lenore Connell 202-564-5343 connell.lenore@epa.gov						
7. Name and Address of EPA Organization US Environmental Protection Agency IASSC East 1200 Pennsylvania Avenue, NW Mail code 3903R Washington, DC 20460			8. Name and Address of Other Agency Consumer Product Safety Commission Office of Hazard Identification and Reduction 4330 East-West Highway, Rm. 502 Bethesda, MD 20814						
9. DUNS: 029128894	10. BETC: COLL	11. DUNS: 069287522	12. BETC: DISB						
13. Project Title and Description Nano Surface Coatings (Phase 2) Exploratory research into the use and application of engineered nanomaterial coatings.									
14. EPA Project Officer (Name, Address, Telephone Number) Todd Luxton 5995 Center Hill Ave Cincinnati, OH 45224 513-569-7210 E-Mail: luxton.todd@epa.gov FAX: (513) 569-7879		15. Other Agency Project Officer (Name, Address, Telephone) Joanna Matheson 4330 East-West Highway, Rm. 502 Bethesda, MD 20814 301-987-2564 E-Mail: jmatheson@cpsc.gov FAX: 301-504-0079							
16. Project Period: 09/29/2016 to 09/28/2018		17. Budget Period: 09/29/2016 to 09/28/2018							
18. Scope of Work (See Attachment)									
19. Employer/Tax ID No. 520852695	20. CAGE No: 347A4		21. ALC: 68-01-0727						
22. Statutory Authority for Transfer of Funds and Interagency Agreement Toxic Substances Control Act: Sec. 10, 15 USC 2609			23. Other Agency Type Federal Agency						
24. Revise Reimbursable Funds and Direct Fund Cites (only complete if applicable)									
	Previous Funding	This Action	Amended Total						
Revise Reimbursable (In-house)		0.00	0.00						
Direct Fund Cite (contractor)		0.00	0.00						
Total			0.00						
	Previous Amount	Amount This Action	Total Amount						
25. EPA Amount			\$0.00						
26. EPA In-Kind Amount		\$25,000.00	\$25,000.00						
27. Other Agency Amount		\$250,000.00	\$250,000.00						
28. Other Agency In-Kind Amount			\$0.00						
29. Total Project Cost		\$275,000.00	\$275,000.00						
30. Fiscal Information									
Treas. Symbol	DCN	FY	Appropriation	Budget Org	PRC	Object Class	Site/Project	Cost Org	Ob/De-Ob Amt
6816/170107		1617	CR	26CLX01	401FK8	0			213,603.00
6816/170107		1617	CR	26CLZ01	401FK8	0			36,397.00
									250,000

Part II - Approved Budget				EPA IAG Identification Number RW-061-92460201 - 0
31. Budget Categories	Itemization of All Previous Actions	Itemization of This Action	In-Kind Itemization of This Action	Itemization of Total Project Cost to Date
(a) Personnel			\$10,000.00	\$10,000.00
(b) Fringe Benefits				\$0.00
(c) Travel				\$0.00
(d) Equipment				\$0.00
(e) Supplies			\$15,000.00	\$15,000.00
(f) Procurement / Assistance		\$213,603.00		\$213,603.00
(g) Construction				\$0.00
(h) Other				\$0.00
(i) Total Direct Charges	\$0.00	\$213,603.00	\$25,000.00	\$238,603.00
(j) Indirect Costs:	\$0.00	\$36,397.00		\$36,397.00
Charged - Amount Rate: % Base: \$ Not Charged: Funds-In: Not charged by EPA Amount \$				
(k) Total (EPA Share 9.09 %) (Other Agency Share 90.91 %)	\$0.00	\$250,000.00	\$25,000.00	\$275,000.00
32. How was the IDC Base calculated?				
33. Is equipment authorized to be furnished by EPA or leased, purchased, or rented with EPA funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Identify all equipment costing \$1,000 or more)				
34. Are any of these funds being used on Procure/Assistance agreements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Type of Procure/Assistance Agreement Contract				
Contractor/Recipient Name (if known)	Total Procure/Assistance Amount Under This Project		Percent Funded by EPA (if known)	
Various	213603.00 Total \$ 213,603.00		0	
<b>Part III - Funding Methods and Billing Instructions</b>				
35. (Note: EPA Agency Location Code (ALC) - 68010727)				
<input type="checkbox"/> Disbursement Agreement	Request for repayment of actual costs must be itemized on SF 1080 and submitted to the Financial Management Office, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Repayment	<input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Upon Completion of Work			
<input type="checkbox"/> Advance	Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Center, EPA, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Allocation Transfer-Out	Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Hdqtrs. Forward appropriate reports to the Financial Reports and Analysis Branch, Financial Management Division, PM-226F, EPA, Washington, DC 20460.			
36. <input checked="" type="checkbox"/> Reimbursement Agreement <input checked="" type="checkbox"/> Repayment <input type="checkbox"/> Advance Allocation Transfer-In				
Other Agency's Billing Address (include ALC or Station Symbol Number)			Other Agency's Billing Instructions and Frequency	
			Other Agency TAS 61150100	

<b>Part IV - Acceptance Conditions</b>	EPA Identification Number  RW-061-92460201 - 0
--	--

37. Terms and Conditions, when included, are located at the end of the 1610-1, or as an attachment.

**Part V - Offer and Acceptance**

**Note:** A) For Fund-out actions, the agreement/amendment must be signed by the other agency official in duplicate and one original returned to the Grants and IA Management Division for Headquarters agreements or to the appropriate EPA Regional IA administration office within 3 calendar weeks after receipt or within any extension of time that may be granted by EPA. The agreement/amendment must be forwarded to the address cited in item 29 after acceptance signature.

Failure to return the properly executed document within the prescribed time may result in the withdrawal of offer by EPA. Any change to the agreement/amendment by the other agency after the document is signed by the EPA Award Official, which the Award Official determines to materially alter the agreement/amendment, shall void the agreement/amendment.

B) For Funds-In actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IA administration office for signature on behalf of the EPA. EPA will return one original copy after acceptance returned to the other agency after acceptance.

<b>EPA IA Administration Office (for administrative assistance)</b>	<b>EPA Program Office (for technical assistance)</b>
<b>38. Organization/Address</b>  U.S. Environmental Protection Agency IASSC East 1200 Pennsylvania Avenue, NW Mail code 3903R Washington, DC 20460	<b>39. Organization/Address</b>  US Environmental Protection Agency ORD - Office of Research and Development 5995 Center Hill Ave Cincinnati, OH 45224

**Award Official on Behalf of the Environment Protection Agency**

40. Digital signature applied by EPA Award Official   FOR Frank N. Roth - Chief Michelle Messick - AO delegate	Date 08/09/2016
---	--------------------

**Authorizing Official on Behalf of the Other Agency**

41. Signature 	Typed Name and Title Kim Miles, Contracting Officer	Date 8/12/16
--	--	-----------------

## **Administrative Conditions**

### **1 Resolution of Disagreements**

Should disagreements arise on the interpretation of the provisions of this agreement or amendments and/or revisions thereto, that cannot be resolved at the operating level, the area(s) of disagreement shall be stated in writing by each party and presented to the other party for consideration. If agreement or interpretation is not reached within 30 days, the parties shall forward the written presentation of the disagreement to respective higher officials for appropriate resolution.

If a dispute related to funding remains unresolved for more than 30 calendar days after the parties have engaged in an escalation of the dispute, disputes will be resolved in accordance with instructions provided in the Treasury Financial Manual (TFM) Volume I, Part 2, Chapter 4700, Appendix 10, available at <http://www.fms.treas.gov/tfm/index.html>.

### **2 Cost Collection Upon Cancellation**

If the IA recipient cancels the agreement, the Environmental Protection Agency is authorized to collect costs incurred prior to the cancellation of the agreement, plus termination costs, up to the total payment amount provided for under the agreement.

**CPSC-I-16-0021**  
**INTERAGENCY AGREEMENT (IAA) BETWEEN THE**  
**U.S. CONSUMER PRODUCT SAFETY COMMISSION**  
**AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY**

**I. INTRODUCTION**

The U.S. Consumer Product Safety Commission (CPSC) and the U.S. Environmental Protection Agency (EPA) hereby agree that the EPA, subject to the terms and conditions herein, shall conduct preliminary research to improve our understanding of engineered nanomaterial (ENM) surface coatings applied to outdoor/outdoor surfaces for protecting and preserving outdoor surfaces (wooden structures, concrete/stone materials, metals, and plastics) from ultraviolet (UV) radiation damage and indoor/outdoor surfaces for disinfection.

The research under this agreement will expand on work from a previous Interagency Agreement (CPSC- I-15-0023, EPA Reference: RW-061-92436201-0). From 2001 through 2005, the CPSC and the EPA worked together on multiple studies evaluating the release of arsenic from chromated copper arsenate (CCA) treated wood. Building on this historical interagency work, the previous Interagency Agreement, CPSC- I-15-0023, EPA Reference: RW-061-92436201-0, focused on evaluating the release of copper nanoparticles from micronized copper treated lumber. In addition, research results from that work to date include a detailed characterization of the nanomaterials in development or currently available in the market place.

Under CPSC- I-15-0023, lumber pressure-treated with micronized copper was examined for the release of copper and copper micro/nanoparticles using a surface wipe method (“the CPSC method”) to simulate dermal transfer. Treated lumber was purchased from retailers and periodic sampling occurred while the product weathered outdoors for approximately one year. Multiple micronized copper azole formulations were evaluated for copper release. In addition, released copper nanoparticles were evaluated for physico-

chemical changes due to aging. Based on the results, an exposure estimate was determined for the scenario of children at a playground, the most common contact point for children (a manuscript is in preparation).

While a significant amount of work has been completed from CPSC- I-15-0023, CPSC requires additional ongoing research to expand and follow up on the research completed to date. Work under that agreement (which is still ongoing) focused on the application and utilization of the CPSC wipe method for comparison across (product) matrices and with copper ENMs. Results from this research established the potential for release and/or transformation of nanomaterials from freshly applied surface coatings on pressure treated, untreated, and composite lumber. In the market research performed under CPSC- I-15-0023, two representative products were identified that utilized zinc oxide (ZnO) and cerium oxide (CeO<sub>2</sub>) as a UV inhibitors in outdoor stain and clear coat products for protecting wood surfaces.

The work under this Interagency Agreement will focus on:

- 1) Characterization of additional nanomaterial(s) products as a function of aging and exposure: Initial research has established that the ENMs undergo transformation resulting in the dissolution of ZnO and CeO<sub>2</sub>. The mechanisms responsible for the dissolution, degradation and release of the ENMs ZnO and CeO<sub>2</sub> will be evaluated as products age.
- 2) Evaluation of the potential for exposure via oral and inhalation routes from the use of products treated with ENMs ZnO and CeO<sub>2</sub> identified, using *in vitro* assays with the as purchased, as applied, and wipe samples. Evaluation of how the released nanomaterial differs in its potential exposure routes with specific attention paid to ingestion and inhalation.
- 3) Characterization of aerosol formation from application of ENMs ZnO and CeO<sub>2</sub> to surfaces.

4) Determination of pulmonary and cardiovascular response to inhalation of ENMs ZnO and CeO<sub>2</sub> during application and throughout the life cycle.

## **II. TITLE**

Evaluation of CPSC Wipe Method and Exposure Estimate to Nanomaterials in Surface Applications: Surface Coating (Phase 2)

## **III. BACKGROUND**

The number of consumer products that contain nanomaterials continues to grow. One area that is seeing increased growth is the use of nanomaterials for surface applications. Surface applications may be broken down into 2 broad categories. The first category would include permanent surface application such as paints, stains or other coatings intended to protect or preserve the integrity of a surface. In this application ENMs are used to either modify the product for improved use/application (paints) or protect the underlying product from environmental or mechanical stressors (UV coatings, water protectants, or scratch resistant surfaces). The second category would include temporary surface applications in the form of polishes or biocides intended to disinfect surfaces or provide temporary surface protection. Both categories represent different types of nanomaterials (photoactive versus biocide) with different potential exposure routes. While the continued use and application of temporary surface coating may result in prolonged exposure, the use of permanent applications will lead to prolonged exposure to ENM. A number of research projects have focused on the fate, exposure, and health effects of the pristine materials used in ENM surface coatings, however very little is known about the fate, exposure routes and health effects associated with ENMs in surface coatings. This project will offer the unique opportunity to utilize a transdisciplinary approach to explore how ENM in a product matrix differ from pristine materials

while simultaneously evaluating methods for quantifying ENM release exposure and health effects.

The introduction of nano-enabled UV protectants is relatively new. Unlike the previous organic formulations, the materials are more stable and will not actively degrade during UV absorption. The materials currently available on the market are targeted towards outdoor wooden structures, e.g. decks, outdoor furniture, and playground equipment. Based on the properties of the materials there is also the potential of applying them to other outdoor products to prevent UV damage—concrete/stone, plastics, metals. The amount of material used will vary based on the product (concentration of nano-materials) and the manufacturer's recommendation. Based on one product identified, when used according to manufacturer's recommendations, surface loading of the UV protectant is close to 1250 mg m<sup>-2</sup>. Complicating this issue is the potential for chemical interaction between surface coatings and the underlying substrate. In the case of wood, for example, outdoor structures may utilize micronized copper pressure-treated lumber. The potential for an interaction between the coating material and the treating formulation may alter the potential ecological or human health impact. For the current proposal, nano-enabled UV protectant surface coatings will be evaluated. All of the coatings will initially be applied to wood surfaces. One of the coatings will contain cerium oxide (CeO<sub>2</sub>) as the photoactive ingredient, a second coating will utilize zinc oxide (ZnO) as the active ingredient.

#### **IV. PURPOSE AND OBJECTIVES**

The objectives of the proposed research in this IAA are to:

- 1) Characterize nanomaterial(s) in products and released as a function of aging and exposure.
- 2) Evaluate the potential for exposure from the use of the products identified through oral and inhalation exposure routes, through *in vitro* assays, of the as purchased, as applied, and wipe samples.

- 3) Characterize the aerosol formation from application of ENM to surfaces.
- 4) Determine pulmonary and cardiovascular response to inhalation of ENM during application and throughout the life cycle.

The objectives outlined will include estimates of product removal/release during application and due to environmental exposure, changes in the chemical speciation and composition of the material under different environmental conditions, and *in vitro* estimates of nanomaterial bioavailability through ingestion, inhalation, and dermal contact with the products throughout the product lifecycle. Currently, there are few methods that have been validated for assessing the potential eco or human exposure to nanomaterials. Therefore, a critical component of the research will entail exploratory research efforts to establish validated methods.

## V. STATEMENT OF WORK

To address the objectives for this research effort, The EPA's Office of Research and Development will focus research activities on particle characterization of aged coatings, and toxicity testing on new and aged coatings. The specific activities are:

- **Particle characterization:**
  - Conduct research to determine how the speciation of ENMs change as a function of time throughout the product lifecycle.
  - Conduct research to examine the aerosolized particle size, number, and time dependent dispersion of nanomaterials when surface coatings are applied as aerosols.
- **Hazard Identification:** Determine the gastro intestinal bioaccessibility of the as purchased materials utilizing an *in vitro* method currently in development by the U.S. Environmental Protection Agency.
- **Toxicity testing of new and aged materials:** Determine the pulmonary and cardiovascular effects of the materials utilizing *in vitro* assays of the as purchased materials.
  - **Pulmonary Toxicity Testing:** The BEAS2B Assay, this assay employs a human airway epithelial cell\_line to assess the in vitro

pulmonary toxicity by examining endpoints such as cytotoxicity, cellular stress, and proinflammatory cytokine production as well as kinetics of production will be evaluated.

- **Cardiac Toxicity Testing:** The **CDI iCell CM assay** which consists of human adult stem cell derived cardiomyocytes will be employed to assess the in vitro cardiac toxicity by examining endpoints such as: cytotoxicity, cellular stress, alterations in contractility (using real time impedance measurements) and electrophysiology (using real time microelectrode action potential measurements). Alterations in contractility and electrophysiology following neurogenic stimulations will also be conducted to determine impacts associated with autonomic control of cardiomyocytes. The **Cardiac Precursors Stem Cell assay** which consists of human adult derived precursor cardiac stem cells will be employed to assess the effects on cardiac precursor stem cell differentiation and reflect biomarkers of disease susceptibility and longevity.
- **Vascular Toxicity Testing (optional):** **Ex vivo arterial myography assay** may be conducted depending on support using rat arterial ring perfusion while measuring endpoints such as endothelial dependent and independent contraction and dilation as well as arterial stress responses. This assay is being offered as optional and dependent on additional support.
- **Aging of coatings:** Set up long term environmental and potentially ecological exposure experiments. These experiments will be used to determine how the fate, exposure, and health effects of the ENM change with time and under different environmental conditions. Long term exposure studies will include: uncontrolled outdoor exposure of materials, controlled prolonged exposure to UV light and subsequent leaching of the surface, and aging of materials in a controlled environment free of UV light and moisture.
- Develop a correlation between the physicochemical properties of the pristine materials and the environmentally exposed materials. Specific attention will

be applied to what characterization and exposure methods are most predictive of health effects.

## **VI. EPA FURNISHED MATERIALS/EQUIPMENT**

EPA agrees to furnish all necessary personnel, equipment, materials, services, and facilities to complete the objectives listed in Section IV, "Purpose and Objectives" and to complete the activities listed in Section V, "Statement of Work".

## **VII. CONFIDENTIALITY REQUIREMENTS**

The EPA staff will submit to the CPSC any report, manuscript or other document containing the results of work performed under this agreement before such document is published or otherwise disclosed to the public in order to assure compliance with Section 6(b) of the Consumer Product Safety Act (15 USC 2055(b)), Commission regulations (16 CFR Part 1101), and a Commission Directive (Order No. 1450.2). This clearance restricts disclosure of information that: (1) permits the public to identify particular consumer products, or (2) reflects on the safety of a class of consumer products. Prior submission allows the CPSC staff to ensure compliance with applicable disclosure provisions. EPA staff agrees to consult with CPSC staff and to provide any drafts of reports or presentation materials to CPSC staff for review.

## **VIII. REPORTING REQUIREMENTS**

EPA will provide an interim report at the end of each fiscal year. The first report will be due September 28, 2017. Updates on the status of the project will occur as requested by the CPSC staff through the time period of the IA. A final report will be submitted to the project officer at the completion of the IAG September, 2018.

EPA shall insure that the rights to all information, uses, processes, patents, and other developments resulting from the IAA activity will be made available to the public without charge on a nonexclusive basis.

## **IX. PERIOD OF PERFORMANCE**

The period of performance shall begin on the effective date and shall not extend beyond 24 months from the effective date. This agreement may be modified by mutual consent of CPSC and EPA project officers.

## **X. DELIVERY OR PERFORMANCE**

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

An interim report summarizing all activities for this project will be submitted by September 28, 2017. A final report will be submitted to the project officer at the completion of the IAG September, 2018.

## **XI. DISAGREEMENTS**

In the event that the CPSC and EPA have a disagreement arising under this Interagency Agreement, then the parties shall cooperatively seek to resolve the disagreement by themselves. If the disagreement cannot be resolved between them, then the parties agree to seek the assistance of a third party in resolving the disagreement.

## **XII. LIAISON OFFICERS**

CPSC Liaison Officers  
Trey A. Thomas, Ph.D.  
Leader, Chemical Hazards Program  
Office of Hazard Identification and Reduction  
U.S. Consumer Product Safety Commission  
4330 East West Highway Suite 600  
Bethesda, MD 20814  
Tel 301-987-2560  
Email: tthomas@cpsc.gov

Joanna Matheson, PhD  
Lead for Nanotechnology Interagency Agreements and Contracts  
Health Sciences Directorate  
U.S. Consumer Product Safety Commission  
5 Research Place  
Rockville, MD 20850  
Tel 301-987-2564  
Email: jmatheson@cpsc.gov

EPA Liaison Officer  
Todd Luxton PhD  
National Risk Management Research Laboratory  
Office of Research and Development  
US Environmental Protection Agency  
Cincinnati, Ohio  
Phone 513-569-7210  
Email: luxton.todd@epa.gov

### **XIII. COST AND TRANSFER OF FUNDS**

The total estimated cost for Phase 2 of this IAA is estimated at \$250K, provided with FY- 2016 funds.

EPA Administrative Point of Contact:

Nicole Edwards, Acquisition Specialist  
Partnership Management Branch,  
Extramural Management Division, ORD/OARS  
703-347-8546 (o)  
703-347-8696 (f)  
edwards.nicole@epa.gov

#### **XIV. FUNDING AND ACCOUNTING DATA**

**CPSC PAYMENT OFFICE**

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

**AGENCY PAYMENT OFFICER:**

Debbie Young, Agency Payment Officer  
Enterprise Service Center  
Office of Financial Operations  
Federal Aviation Administration  
PO Box 25710  
Oklahoma City, OK 73125  
(405) 954-7467  
Email: [C-AMZ-CPSC-Accounts-Payable@faa.gov](mailto:C-AMZ-CPSC-Accounts-Payable@faa.gov)

The transfer of funds shall be from CPSC to EPA through the On-Line Payment Collection (OPAC) system using the following accounting data:

**Transfer From:**

**CPSC**

**BETC: DISB**

**Taxpayer ID Number (TIN): 520978750**

**Agency Location Code (ALC): 61-00-0001**

**DUNS: 069287522**

**US Treasury Code: 61160100**

**AMOUNT: \$ 250,000.00**

**ACCOUNTING DATA: 0100A16DPS 2016 2370400000 EXHR004000 255AO**

**To:**

**BETC: COLL**

**Taxpayer ID Number (TIN): 52-0852695**

**Agency Location Code (ALC): 68010727**

**DUNS: 029128894**

**US Treasury Code: 682/30107**

**AMOUNT: \$ 250,000**

**ACCOUNTING DATA: CAN 6999AJY**

**Grants Administrative Officer: Lenore Connell**

## **XV. AUTHORITIES**

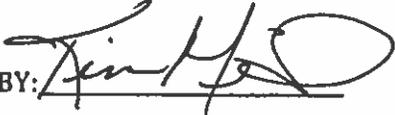
**For EPA:**

**Toxic Substances Control Act, Section 10(d) which authorizes the Administrator of EPA to be responsible for research aimed at the development, in cooperation with other Federal agencies, or monitoring techniques which may be used in the detection of toxic chemical substances.**

**For CPSC:**

Section 27(g) of the Consumer Product Safety Act, (15 U.S.C. 2076(g)).

APPROVED AND ACCEPTED FOR  
THE U.S. CONSUMER PRODUCT  
SAFETY COMMISSION

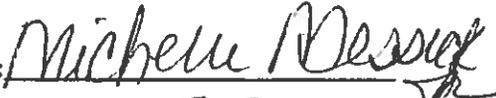
BY: 

SIGNATURE: Kim Miles

TITLE: Contracting Officer

DATE: 8/12/16

APPROVED AND ACCEPTED FOR  
THE U.S. ENVIRONMENTAL  
PROTECTION AGENCY

BY: 

SIGNATURE: 8-9-16

TITLE:

Frank Roth, Branch Chief  
Fellowship, IA&SEE's Branch

DATE: