

Subcontract Under a Federal Award

No. #23-01534 ("Subcontract")

Under U.S. Army Contracting Command – Detroit Arsenal (US Army) ("Awarding Agency")

Cooperative Agreement No. W56HZV-23-2-0001 ("Prime Contract")

This Subcontract is entered into between the Prime Contractor and the Subcontractor named below (individually, a "Party" and, collectively, the "Parties"), for the performance of a portion of the Statement of Work originally awarded to the Prime Contractor. The Parties agree to the following terms and conditions:

Prime Contractor ("Contractor" or "WSU" or "University") Name: Wichita State University Address: 1845 Fairmount, Wichita, KS 67260-0093 DUNS: 053078127	Subcontractor ("Subcontractor") Name: Auburn University Address: 540 Devall Dr, Suite 200 Auburn AL 36832-5888 DUNS: 066470972
Prime Contractor PI Name: John S. Tomblin, Ph.D.	Subcontractor PI Name: Nima Shamsaei
Subcontract Period of Performance: Start: 6/15/2023 End: 6/15/2025	Contract Value: Amount Funded This Action: \$ 3,255,444.00 Cost Share Committed: \$325,546 Total Funded Amount Obligated: \$3,580,990.00
Subcontract Type: Cost Reimbursable	

Project Title: Additive Manufacturing Material and Process Rapid Qualification for Vehicle Applications

- Subcontractor's Work:** Subcontractor will be responsible for the services as outlined in the Statement of Work ("SOW") attached hereto as Attachment 4 and related tasks as are assigned by Contractor staff in writing, which are made a part of this Subcontract by this specific reference ("Services").
- Limitation on Costs:** Contractor is not liable for any cost in excess of the amount listed above without prior formal modification to this Subcontract. Subcontractor is not obligated to continue performance under this SOW or this Subcontract or otherwise incur costs in excess of the amount set forth in a specific SOW above without prior formal modification to this Subcontract and/or the SOW.
- Payment:** Subcontractor shall submit invoices in the format of the Sample Invoice at Appendix A or in a similar format consistent with Subcontractor's approved accounting system for the purposes of reimbursement. Invoices must be prepared in a manner and in sufficient detail to support all costs incurred during the invoice period and cumulative to date. Invoices must meet specific invoicing requirements to the separate funding sources. A detailed itemization of actual expenses incurred during the invoice period must be attached to each invoice upon request by Contractor. Individual expense items must be supported by a copy of receipt or vendor invoice and retained by Subcontractor. Invoices that do not provide said information may be returned to Subcontractor. Subcontractor must submit an invoice and any applicable cost share contribution for allowable costs incurred no later than the fifteenth business day after the end of each month as directed under Appendix A. Invoices shall not be submitted more frequently than monthly except for final invoices. Subcontractor will mark "Final Invoice" on the final invoice submitted under this Subcontract. The final reporting, if required, from Subcontractor to Contractor shall be submitted **no later than** thirty (30) days after the period of performance. All invoices shall contain the following certification as to truth and accuracy of invoice: *"By signing this report, I certify to the best of my knowledge and belief that the report is true, complete and accurate, and the expenditures, disbursements and cash receipts are for the purposes and intent set forth in the award documents."* **Invoices that do not reference Subcontract Number and specific SOW may be returned to Subcontractor.** Invoices and questions concerning invoice receipt or payments should be directed to the appropriate party's **Financial** Point of Contact as shown in Attachments 3A & 3B. All payments shall be considered provisional and subject to adjustment if adjustment is necessary as a result of an adverse audit finding against Subcontractor. Contractor reserves the right to reject any invoice that does not comply with the terms of this Subcontract. Subcontractor shall have the right to submit a correct invoice. A corrected invoice should be submitted as soon as possible, and no later than thirty (30) days following the end of the Period of Performance in the specific SOW. Payment shall be due net forty-five (45) days from the date of an acceptable invoice.
- Incorporation of Terms and Conditions:** The documents set forth in Section 5 below (the "Attachments") are attached hereto and hereby incorporated in their entirety as if fully set forth herein.
- Order of Precedence:** Any inconsistencies in this Subcontract shall be resolved by giving precedence in the following order:
 - This Document and Attachment 1, "Representations and Certifications;"
 - Attachment 6, "Flow-Down Clauses Applicable to Purchase Orders or Agreements Involving Funds from a Federal Award (hereinafter "Federal Contract Terms and Conditions");
 - Attachment 4, "Subcontractor Statement of Work and Reporting Requirements";
 - Attachment 5, "Payment Schedule";
 - Attachment 3A, "Prime Contractor Contacts"
 - Attachment 3B, "Subcontractor Contacts"

6. **Key Personnel.** All Subcontractor personnel identified in the Prime Contract including, but not limited to Subcontractor's Principal Investigator (the "Key Personnel") are considered essential to the work to be performed under this Subcontract. If Subcontractor wishes to replace and/or reduce the effort of any or all of its Key Personnel, Subcontractor shall provide written notice of such modification (including, but not limited to the names and effort of the proposed substitute Key Personnel) to Contractor at least thirty (30) business days prior to the proposed start date of any new Key Personnel. Upon receipt of Subcontractor's notice of replacement of Key Personnel, Contractor shall have the option to either (a) accept any or all of the substitute Key Personnel, (b) request different Key Personnel, and/or (c) terminate this Subcontract, without penalty. **Contractor shall notify Subcontractor within thirty (30) business days after receipt of such notice of its decision either to continue the Subcontract with the substituted Key Personnel, request different Key Personnel, or to terminate this Subcontract.** Under no circumstance is Contractor obligated to accept Subcontractor's proposed substitute Key Personnel.
7. **Protection of Proprietary Information.** Each Party may gain access to Confidential Information of the other Party and/or third parties during the performance of this Subcontract. For purposes of this Subcontract, "Confidential Information" means any information, knowledge or data received by one Party (the "Receiving Party") from the other Party (the "Disclosing Party") that is: (a) clearly marked with proprietary legends by the Disclosing Party at the time of disclosure, or (b) if the information is orally or visually disclosed, that is identified as proprietary at the time of said first disclosure and is clearly marked with proprietary legends and/or is reduced to writing within thirty (30) days of oral or visual disclosure. The Parties agree that all Confidential Information shall be kept confidential and shall not be disclosed to third parties and will be treated by the Parties with the same degree of care with which each treats and protects its own Confidential Information, but in no instance less than reasonable care. In addition, Receiving Party shall only disclose Confidential Information to those employees within its organization requiring access to perform tasks contemplated by this Subcontract, and any such employees shall be made aware of and subject to the restrictions imposed hereunder on the use of the Confidential Information. The Receiving Party shall use such Confidential Information only for the mutual benefit of the Parties and in furtherance of this Subcontract. Neither Party shall use Confidential Information for any other purpose. Notwithstanding the foregoing, Contractor, as an educational institution of the State of Kansas, is bound by the requirements of the Kansas Open Records Act, K.S.A. 45-215 et seq. Accordingly, the parties acknowledge that no provision of this Subcontract issued hereunder shall restrict Contractor's ability and obligation to, in response to a lawful request, produce this Subcontract, and any reports and/or records provided pursuant to this Subcontract. The obligations set forth under this paragraph shall continue for a period of five (5) years after the expiration or earlier termination of this Subcontract.
8. **Insurance.**
9. **Indemnification.** **Each Party shall be responsible for its own negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law.**
10. **Assignment.** **Neither Party may assign this Subcontract or any interest therein without the written consent of the other Party.** This Subcontract shall be binding upon and inure to the benefit of the Parties and their respective successors, legal representatives, and assigns.
11. **Severability.** If any provision of this Subcontract or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this Subcontract which can be given effect without the invalid provision, and to this end the provisions of this Subcontract are declared to be severable.
12. **Waiver.** No waiver of any term or provision of this Subcontract whether by conduct or otherwise in any one or more instances shall be deemed to be, or construed as, a further or continuing waiver of any such term or provision, or of any other term or provision, of this Subcontract.
13. **Unilateral Amendments to Period of Performance and Budget.** Contractor may issue certain changes to the Subcontract Period of Performance and Subcontractor Budget: ☐ Unilaterally ☒ Bilaterally.
14. **Stop Work Order:** In the event of a Stop Work Order issued by the Awarding Agency, Subcontractor shall immediately comply upon receiving such notice by the Contractor.
15. **Disputes.** **The Parties shall attempt to resolve all disputes through informal means. Each Party agrees that, prior to resorting to litigation to resolve any dispute, it will confer with the other Party to determine whether other procedures that are less expensive or less time consuming can be adopted to resolve the dispute.**
16. **Independent Contractor.** The Subcontractor is engaged as an independent contractor. Nothing in the Subcontract is intended to, or shall be deemed to, constitute a partnership or joint venture between the Parties. No Party has the authority to bind any other party in contract or to incur any debts or obligations on behalf of any other party, and no Party (including any employee or other representative of a party with responsibility for program matters) shall take any action that attempts or purports to bind any other party in such a manner, without the affected Party's prior written approval.
17. **Publicity/Use of Name.** **Neither Party shall use the name of the other Party, or the name of any faculty member, employee, or student of the other Party, in connection with any product, service, promotion, news release, or other publicity without the prior written permission of the other Party and, if an individual's name be concerned, of that individual.**
18. **Export Controls.** The Parties understand that the export of goods and/or technical data from the United States may require some form of export control license from the U.S. Government in accordance with Export Administration Regulations, Title 15 CFR, sections 730-774. The Parties agree that they will not disclose, export or re-export any

Commented [JW1]: This language has been included in previous contracts between Auburn University and Wichita State University.

Commented [JW2]: No insurance provision has been included in other contracts between Auburn University and Wichita State University. Auburn University has a self-insured fund equivalent to that of comprehensive general liability insurance coverage for bodily injury and property damage within the limits of at least \$1,000,000 for each occurrence. Additionally, Auburn University has a self-insured fund equivalent to that of auto liability insurance coverage with limits of \$1,000,000. Auburn University also maintains an on-the-job injury program that conforms to the statutory limits of the Workers' Compensation Laws of Alabama. As such, we request this Insurance provision to be removed entirely.

Commented [JW3]: Auburn University is granted sovereign immunity as an instrumentality of the State of Alabama under Article I, Section 14 of the Alabama Constitution and under the 11th Amendment of the United States Constitution. As such, Auburn University has no legal authority to agree to an indemnification provision in a contract. Article 1, Section 14 and Article IV, Section 93 of the Alabama Constitution prohibits an instrumentality of the State of Alabama from agreeing to indemnify, defend, or hold harmless another party. The proposed revision has been used in previous contracts between Auburn University and Wichita State University.

Commented [JW4]: This proposed revision has been used in prior contracts between Auburn University and Wichita State University.

Commented [JW5]: This proposed language revision has been used in prior contracts between Auburn University and Wichita State University.

Commented [JW6]: This proposed revision has been used in prior contracts between Auburn University and Wichita State University. This language is preferred over the original language because it places limitations on use of name for both Auburn University and Wichita State University.

materials or technical data received under this Subcontract to any countries for which the U.S. Government requires an export license unless it has obtained prior written authorization first from the cognizant government agency or other authority responsible for such matters. The Parties further agree that in the event that export license is required, the Party requiring such a license shall be responsible for the cost of obtaining such license.

19. **Closeout.** Along with any other reports or deliverables required hereunder, Subcontractor shall submit its final invoice and any requested release and assignment forms to Contractor within **30** calendar days following completion of the period of performance of this Subcontract. Payment of the final invoice will be withheld pending: (a) completion, submission, and acceptance by Contractor of all work performed hereunder; (b) completion by Subcontractor of any requested release forms, including patent/invention report, and property report; and (c) clear, visible, and proper marking of "final invoice" on the actual final invoice.
20. **Warranty.** Subcontractor shall be responsible for all work in this Subcontract. Subcontractor **makes no representations or warranties, express or implied, regarding its performance under this Subcontract. Subcontractor disclaims any warranty of merchantability, use or fitness for any particular purpose and non-infringement of any intellectual property rights with regard to study data, results, inventions, copyrightable works, tangible research property, or other research results provided by Subcontractor.**
21. **Compliance with Laws.** Subcontractor shall at all times comply with all applicable federal, state, and local laws, ordinances, and regulations, including but not limited to the *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, Title 2 Code of Federal Regulations §200 et seq. and implemented by the DoD at 2 CFR part 1104 "Interim Grants and Cooperative Agreements Implementation of Guidance in 2 CFR part 200" (79 FR 76047, December 19, 2014, as amended at 85 FR 49506, August 13, 2020) (collectively, the "Applicable Laws"), in the performance of this Subcontract.
22. **Classified Work.** The Parties acknowledge that this Subcontract may involve classified work. All military security requirements in the performance of this Subcontract shall be maintained in accordance with the specific DD Form 254.
23. **Law and Venue:** This Subcontract shall be subject to, governed by, and construed according to the laws of the State of **Alabama without regard to conflict of law rules or principles. Exclusive jurisdiction shall be in the State of Alabama and any claim for damages against Subcontractor must be filed in the Alabama State Board of Adjustment.**
24. **Counterparts; Electronic Signature.** This Subcontract may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement. The Parties agree that a Party's signature on this Subcontract that is exchanged by portable document format (PDF) or facsimile shall have the effect of original signature of the Party for all purposes. The Parties agree that this Subcontract may be signed with electronic signatures. Whenever either Party executes an electronic signature on this Subcontract, it has the same validity and meaning as a handwritten signature and shall be legally binding equivalent.
25. **Entire Agreement:** This Subcontract, including all attachments hereto, constitutes the entire agreement between the Parties regarding the subject matter herein. Any modification to this Subcontract shall be made in writing and must be signed by an authorized representative of each Party.

IN WITNESS WHEREOF, duly authorized representative of the Parties have entered into this Subcontract as of the date of the last signature set forth below:

Prime Contractor Signature

Subcontractor Signature

Name: John S. Tomblin, Ph.D.
Title: Senior VP for Industry & Defense Programs
Date:

Name:
Title:
Date:

Commented [JW7]: Auburn University cannot make any representations or warranties as to its performance of the work. Auburn University's services under this Subcontract are experimental in nature and are not tested in the way products or services are in the commercial world. As such, Auburn University will use reasonable, good-faith efforts towards the work but cannot warrant or represent as to the quality of the products or services rendered under this Subcontract.

Commented [JW8]: As mentioned above in Provision 9 (Indemnification), Auburn University's status as an instrumentality of the State of Alabama prohibits Auburn University from waiving its sovereign immunity. Furthermore, pursuant to Alabama Code Section 41-9-60 et seq., the exclusive venue for any claim for damages against Auburn University must be filed in the Alabama State Board of Adjustment, which exists to "resolve all claims against the State or any of its institutions, arising out of any contract to which its institutions are parties, where there is claimed a legal or moral obligation resting on the State." As such, Auburn University cannot agree to the laws and legal processes of any other jurisdiction.

**Subcontract Under a Federal Award
Attachment 1
Representations and Certifications
Subcontract No. #23-01534**

The following is incorporated into the Subcontract by reference.

ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2022), FAR Clause 52.204-8, as modified by FAR 4.1202.

ONLINE REPRESENTATIONS & CERTIFICATIONS, FAR Subpart 4.12:

Subcontractor shall complete electronic annual representations and certifications at <https://www.sam.gov> (System for Award Management, or SAM) (see FAR [4.1102](#)). SAM includes all registrations and certifications previously found in CCR/FedReg, ORCA, and EPLS.

(1) Subcontractor shall update the representations and certifications submitted to SAM as necessary, but at least annually, to ensure they are kept current, accurate, and complete. The representations and certifications are effective until one year from date of submission or update to SAM.

(2) When any of the conditions in paragraph (b) of the clause at [52.219-28](#), Post-Award Small Business Program representation, apply, if Subcontractor represented that it was a small business prior to award of this Subcontract, it must update the representations and certifications in SAM as directed by the clause. If Subcontractor represented that it was other than a small business prior to award of this Subcontract, it may update the representations and certifications in SAM as directed by the clause, if its size status has changed since the date of award.

<https://www.sam.gov/SAM/>

Has Subcontractor's Online Representations and Certifications been completed within the last year? ☒ YES ☐ NO

Debarment, Suspension, and Other Responsibility Matters (2 CFR 200.213 and 2 CFR 180)

By signing this Subcontract, the Subcontractor Authorized Official certifies, to the best of his/her knowledge and belief that neither the Subcontractor nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency, in accordance with 2 CFR 200.213 and 2 CFR 180.

Subcontract Under a Federal Award Attachment 3A Subcontract No. ##23-01534			
Prime Contractor Contacts			
Name: Wichita State University			
Address: 1845 Fairmount			
City: Wichita	State: KS	Zip Code + 4: 67260-0007	
Institution Type : State Institution of Higher Education	Congressional District: KS-004	Registration current in SAM? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Administrative Contact			
Name: Amanda Tucker			
Address: 1845 Fairmount, Campus Box 093			
City: Wichita	State: KS	Zip Code + 4 67260-0093	
Telephone: 316-978-6812		Fax: 316-978-3750	
E-Mail: amanda.tucker@idp.wichita.edu			
Principal Investigator			
Name: Rachael Andrulonis			
Address: 1845 Fairmount, Campus Box 093			
City: Wichita	State: KS	Zip Code + 4 67260-0093	
Telephone: 316-218-2773		Fax: 316-978-3750	
E-Mail: Rachael.Andrulonis@idp.wichita.edu			
Financial Contact			
Name: Amy Smith			
Address: 1845 Fairmount, Campus Box 093			
City: Wichita	State: KS	Zip Code + 4 67260-0093	
Telephone: 316-978-6217		Fax: 316-978-3750	
E-Mail: Amy.Smith@idp.wichita.edu			
Invoices Sent To: 1845 Fairmount, Attn: Program Management			
Wichita, KS 67260-0093			
Rachael.Andrulonis@idp.wichita.edu			
Authorized Official			
Name: John S. Tomblin, Ph.D.			
Address: 1845 Fairmount, Campus Box 093			
City: Wichita	State: KS	Zip Code + 4 67260-0093	
Telephone: 316-978-6427		Fax: 316-978-3750	
E-Mail: Contracts@idp.wichita.edu			

Subcontract Under a Federal Award Attachment 3B Subcontract No. #23-01534 Subcontractor Contacts			
Name:			
Address:			
City:	State:	Zip Code + 4:	
Institution Type :	Congressional District:	Registration current in SAM.gov? Yes _ No __	
EIN:	DUNS:	Parent DUNS:	
Did Subcontractor's gross income, from all sources, in the previous tax year exceed \$300,000? <input type="checkbox"/> Yes <input type="checkbox"/> No Is the Performance Site the same address as set forth above? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, is the Performance Site the same as the PI address set forth below? <input type="checkbox"/> Yes <input type="checkbox"/> No If Subcontractor answered "no" to any of the above questions, please complete "Attachment 3B, Page 2," below. Is Subcontractor exempt from reporting compensation? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, complete "Attachment 3B, Page 2," below.			
Administrative Contact			
Name:			
Address:			
City:	State:	Zip Code + 4:	
Telephone:	Fax:		
E-Mail:			
Principal Investigator			
Name:			
Address:			
City:	State:	Zip Code + 4:	
Telephone:	Fax:		
E-Mail:			
Financial Contact			
Name:			
Address:			
City: H	State:	Zip Code + 4:	
Telephone:	Fax:		
E-Mail:			
Checks Sent To:			
Name:			
Address:			
City:	State:	Zip Code + 4:	
E-Mail:			
Authorized Official			
Name:			
Address:			
City:	State:	Zip Code + 4:	
Telephone:	Fax:		
E-Mail:			

<p align="center">Subcontract Under a Federal Award Attachment 3B, Page 2 Place of Performance & Highest Compensated Officers Subcontract No. #23-01534</p>		
Subcontractor Name:		
Place of Performance:		
Name:		
Address:		
City:	State	Zip Code + 4
Telephone:		
E-Mail:	Congressional District:	
<p>The names and total compensation of the five most highly compensated officers of Subcontractor must be listed if:</p> <p>(i) Subcontractor in the preceding fiscal year received:</p> <p>(I) 80 percent or more of its annual gross revenues in Federal awards (federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements); AND</p> <p>(II) \$25,000,000 or more in annual gross revenues from Federal awards; AND</p> <p>(ii) the public does not have access to information about the compensation of the senior executives of Subcontractor through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986.</p> <p>Is Subcontractor exempt from reporting executive compensation? Yes <input type="checkbox"/> No <input type="checkbox"/> If no, complete the information below.</p>		
Officer 1 Name		
Officer 1 Compensation		
Officer 2 Name		
Officer 2 Compensation		
Officer 3 Name		
Officer 3 Compensation		
Officer 4 Name		
Officer 4 Compensation		
Officer 5 Name		
Officer 5 Compensation		

**Subcontract Under a Federal Award
Attachment 4
Subcontractor Statement of Work and Reporting Requirements
Subcontract No. 23-01534**

Additive Manufacturing Material and Process Rapid Qualification for Vehicle Applications

Research Objectives:

The objective of this topic area is to develop a rapid and reliable approach for material and process qualification across different OEMs of metal LPBF equipment.

Approach:

The objective of this topic area will be met through investigating two different methodologies for establishing repeatability; deriving equivalent inputs to achieve equivalent outputs and achieving equivalent outputs through different inputs. Using the former methodology, equivalent processing parameters for disparate LPBF machines will be derived through parameter translation. Using the latter approach, machine learning (e.g., Senvol) will be used to identify the potentially different inputs necessary for disparate LPBF machines to achieve equivalent outputs (e.g., defects, mechanical properties, etc.). It is expected that both process monitoring, and defect identification will aid in developing the approach for either methodology.

To achieve the objective of the project, the following tasks and deliverables are envisioned:

- 1 The contractor, with the approval of the Government, shall select two laser powder bed fusion (LPBF) machines manufactured by different OEMs for the Parameter Equivalency and Part/Material Equivalency studies. Additionally, the contractor shall select two laser powder directed energy deposition (DED) machines for inclusion in only the parameter equivalency study below.
- 2 The contractor shall select a single material for the LPBF machines and a single material for the two DED machines, agreed upon by the Government, for use on both pieces of equipment, to come from the same lot of virgin powder.
- 3 The contractor shall evaluate the powder feedstock before each build, characterizing PSD, flowability, rheological properties, and chemical composition.
- 4 The contractor shall design test specimens for manufacturing on all machines. The test specimens shall aid in the demonstration of repeatability across machines, and shall minimally include mechanical, XCT, and PCRT specimens for the LPBF machines. The contractor shall design a single build layout that can be executed on the two different machines for both the DED and LPBF builds.
- 5 The contractor, with the approval of the Government, shall procure a powder fed directed energy deposition system for use in the Parameter Equivalency study.

Parameter Equivalency

- 6 The contractor shall develop a comprehensive list of machine agnostic process variables (MAPVs) and the OEM specific variables (OSVs). From the MAPVs, the contractor shall use identical process parameters on each OEM equipment and execute test builds with those parameters.
- 7 The contractor shall collect and evaluate all process monitoring and control data made available by the manufacturer and compare the data across the machines.
- 8 The contractor shall evaluate the test specimens for equivalency in chemical, mechanical, and metallurgical properties
- 9 The contractor shall develop a Parameter Equivalency Plan that details the approach and methodology for determining equivalent process parameters and evaluating the resultant material. This plan shall address both physical testing as well as process monitoring and control and will be approved by the Government. The focus will be on one equivalency parameter; e.g., volumetric defects, to be approved by the Government.
- 10 The contractor shall produce a Parameter Equivalency Test Matrix that identifies the type of testing and number of tests to include in the Parameter Equivalency Plan. This test matrix shall be submitted with the Machine Equivalency Plan,

and will be approved by the Government. The contractor shall submit the test matrix a second time populated with the results after the testing is completed.

11 The contractor shall produce a Parameter Equivalency Report that details the results of the parameter equivalency approach.

Part/Material Equivalency

12 The contractor shall develop a Part/Material Equivalency Plan that details the approach and methodology for evaluating equivalency. This plan shall address both physical testing as well as process monitoring and control and will be approved by the Government.

13 It is possible that equivalent MAPVs on two different machines do not lead to equivalency in chemical, mechanical, and metallurgical properties. Therefore, in parallel, the contractor shall work to identify the OSVs that lead to equivalency in chemical, mechanical, and metallurgical properties.

14 The contractor shall produce a Part/Material Equivalency Test Matrix that identifies the type of testing and number of tests to include in the Parameter Equivalency Plan. This test matrix shall be submitted with the Machine Equivalency Plan and will be approved by the Government. The contractor shall submit the test matrix a second time populated with the results after the testing is completed.

15 The contractor shall use machine learning techniques in the development of the OSVs referenced in 6.

16 With the developed OSVs, the contractor shall execute test builds on both pieces of equipment.

17 The contractor shall collect and evaluate all process monitoring and control data made available by the manufacturer and compare the data across the machines.

18 The contractor shall evaluate the test specimens from the test builds for equivalency in chemical, mechanical, and metallurgical properties.

19 The contractor shall produce a Material Equivalency Report that details the results of the part/material equivalency approach

Timeline:

	Year One Research Tasks and Deliverables
Q1	Deliverables of Tasks 1 – 4 (2 LPBF machines selected, a DED machine ordered, material selected, and feedstock evaluated)
Q2	Deliverables of Task 5 (test specimens designed)
Q3	Deliverables of Tasks 6 – 8 (MAPVs and OSVs for both LPBF machines identified, process monitoring data collected and evaluated, and test specimens characterized)
Q4	Deliverables of Tasks 9 & 10 (Parameter Equivalency Plan and Parameter Equivalency Test Matrix developed)
	Year Two Research Tasks and Deliverables
Q1	Deliverables of Tasks 10 – 12 (Parameter Equivalency Test Matrix with results & Parameter Equivalency Report submitted and Part/Material Equivalency Plan developed, or the OSVs that lead to equivalency are identified)
Q2	Deliverables of Task 14 (Part/Material Equivalency Test Matrix developed)
Q3	Deliverables of Tasks 16 – 18 (builds for Part/Material Equivalency Test Matrix printed, process monitoring data collected and evaluated, and test specimens characterized)
Q4	Deliverables of Tasks 14 & 19 (Part/Material Equivalency Test Matrix with results & Material Equivalency Report submitted)
	Longer-term goals (if any)
Y3	N/A

MINT-GS/GVSC/Industry Benefits:

The work detailed in this proposal will directly benefit the work GVSC is performing to assist Rock Island Arsenal in setting up their Additive Manufacturing production capability. It will allow for more rapid and cost-effective means for qualifying machines and materials on production AM equipment at RIA. The data generated in this project will be able to be leveraged by GVSC as it will be generated on similar equipment.

Furthermore, this research will benefit other MINT-GS research into Laser Powder Bed Fusion (L-PBF), Powder Bed Directed Energy Deposition (PF-DED), Wire Arc Additive Manufacturing (WAAM), and Laser Wire Additive Manufacturing (LWAM) technologies. It will benefit this research because a similar approach to equivalency can be applied to those technologies. For example, the parameter equivalency plan developed under this project can be modified slightly, and then leveraged for a similar activity with WAAM equipment.

All of the data generated under this project will advance technologies that are dual use, i.e., it can be used for both military and commercial civilian applications. The AM technology described herein is used both commercially and militarily, and the benefits will impact quality assurance in both industries.

Technical and Financial Reporting

Subcontractor will provide Contractor with the following Data:

Task	Due Date
Baseline Spend Profile by Task	15 days upon Award
Percent Complete by Task	Quarterly
Total Spend by Task	Quarterly

A. Business Status Report

1. Business Status Reports - The Subcontractor shall prepare and deliver to the Contractor a report detailing (i) the resource status of the total contributions of both Parties broken down by Category Area and Subrecipient, and (ii) the expenditures invoiced each month (the "Business Status Report"). The Business Status Report shall be submitted monthly. The Contractor will review each Business Status Report to determine if spending is in line with the approved Annual Plan.
2. SF 425 (Formerly SF-269) – Pursuant to 2 CFR 200.327, the Subcontractor shall deliver a Standard Form 425 (SF 425) for financial reporting to the Contractor on a semi-Annual basis

B. Technical Status Report

1. A technical status report ("Technical Status Report") must be prepared and delivered for each Statement of Work. Each Technical Status Report shall detail the technical issues, major developments, and financial progress (including funding disbursed and projected funding needed) for the individual Statement of Work. The Technical Status Report shall be delivered to the Contractor two times annually (June 1, November 30) of each Agreement Year. The Contractor will review each Technical Status Report to determine status of each Statement of Work.

C. Special Technical Reports

1. As determined and agreed to by the Subcontractor and the Contractor, at no additional cost to the Awarding Agency, the Subcontractor shall deliver to the Contractor one copy of special reports on significant events such as significant target accomplishments by the Subcontractor, significant tests, experiments, or symposia.

D. Final Report

1. Within ninety (90) calendar days of completion or termination of this Agreement, the Subcontractor shall deliver a draft Final Report to the Contractor. This draft Final Report shall contain the following: (1) the technical achievements of the Program; and (2) a recap of the business/financial aspects of the Program. The technical portion shall provide a recap of the Program, discussing Program accomplishments, and shall include information that is suitable for publication. With the approval of the GPM, reprints of published articles may be submitted or attached to the technical portion. The business portion shall

contain a separate discussion of total costs incurred, total costs contributed by the Subcontractor, and an explanation of any deviations from the original Annual plan. The Contractor shall review and provide comments of the draft Final Report within sixty (60) days of its receipt. The Subcontractor shall incorporate the Contractor's comments and deliver a Final Report within sixty (60) days of receipt of the Contractor's comments. The original and two copies of the Final Report shall be delivered to the Contractor.

2. The Final Report shall be marked on the front page as follows "Distribution Statement D" IAW DoDI 5230.24

DRAFT

**Subcontract Under a Federal Award
Attachment 5
Payment Schedule
Subcontract No. 23-01534**

Payment:

That in consideration of the Services and assistance rendered to Contractor by Subcontractor, Contractor will pay Subcontractor an amount of not to exceed three million two hundred fifty-five thousand and four hundred forty-four dollars and NO cents (\$3,255,444.00), as outlined in Table 1.1, which shall be paid to Subcontractor upon receipt of invoice, it being specifically understood and agreed by the parties that said payment is intended to compensate Subcontractor for all Subcontractor's expenses, including, but not limited to, travel, meal, and overnight accommodation expenses; and other authorized expenses that are incurred in the performance of this Agreement.

Table 1.1

		Year 1 Federal	Year 1 Cost Share	Year 2 Federal	Year 2 Cost Share	Federal Total	Cost Share Total	Project Total
Salaries								
Nima Shamsaei (PI)		\$ 28,318	\$ -	\$ 29,168	\$ -	\$ 57,486	\$ -	\$ 57,486
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Shuai Shao		\$ 12,229	\$ 3,057	\$ 12,596	\$ 3,057	\$ 24,825	\$ 6,114	\$ 30,939
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TBD: Assistant Research Professor		\$ 42,640	\$ 3,553	\$ 36,600	\$ 3,554	\$ 79,240	\$ 7,107	\$ 86,347
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TBD: Project Coordinator		\$ 15,000	\$ -	\$ 15,450	\$ -	\$ 30,450	\$ -	\$ 30,450
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Steve Taylor		\$ -	\$ 24,692	\$ -	\$ 24,692	\$ -	\$ 49,384	\$ 49,384
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Allan David		\$ -	\$ 7,764	\$ -	\$ 7,764	\$ -	\$ 15,528	\$ 15,528
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Brock Birdsong		\$ -	\$ 14,954	\$ -	\$ 14,955	\$ -	\$ 29,909	\$ 29,909
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Emanuel Winful		\$ -	\$ 8,195	\$ -	\$ 8,195	\$ -	\$ 16,390	\$ 16,390
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Christian Brodbeck		\$ -	\$ 11,140	\$ -	\$ 11,140	\$ -	\$ 22,280	\$ 22,280
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TBD: Research Engineer		\$ 84,000	\$ -	\$ 86,520	\$ -	\$ 170,520	\$ -	\$ 170,520
TBD: Post-Doc1		\$ 72,000	\$ -	\$ 72,000	\$ -	\$ 144,000	\$ -	\$ 144,000
TBD: Post-Doc2		\$ 72,000	\$ -	\$ 72,000	\$ -	\$ 144,000	\$ -	\$ 144,000
TBD: ME PhD1		\$ 24,000	\$ -	\$ 24,000	\$ -	\$ 48,000	\$ -	\$ 48,000
TBD: ME PhD2		\$ 24,000	\$ -	\$ 24,000	\$ -	\$ 48,000	\$ -	\$ 48,000
TBD: ME PhD3		\$ -	\$ -	\$ 24,000	\$ -	\$ 24,000	\$ -	\$ 24,000
Total Salaries		\$ 374,187	\$ 73,355	\$ 396,333	\$ 73,357	\$ 770,520	\$ 146,712	\$ 917,232
Fringes:								
Nima Shamsaei Fringe	30.7%	\$ 8,694	\$ -	\$ 8,954	\$ -	\$ 17,648	\$ -	\$ 17,648
Shuai Shao Fringe	30.7%	\$ 3,754	\$ 938	\$ 3,867	\$ 938	\$ 7,621	\$ 1,876	\$ 9,497
Assistant Research Prof Fringe	30.7%	\$ 13,090	\$ 1,091	\$ 11,236	\$ 1,091	\$ 24,326	\$ 2,182	\$ 26,508
Project Coordinator Fringe	30.7%	\$ 4,605	\$ -	\$ 4,743	\$ -	\$ 9,348	\$ -	\$ 9,348
Steve Taylor Fringe	30.7%	\$ -	\$ 7,580	\$ -	\$ 7,580	\$ -	\$ 15,160	\$ 15,160
Allan David Fringe	30.7%	\$ -	\$ 2,384	\$ -	\$ 2,384	\$ -	\$ 4,768	\$ 4,768
Brock Birdsong Fringe	30.7%	\$ -	\$ 4,591	\$ -	\$ 4,591	\$ -	\$ 9,182	\$ 9,182
Emanuel Winful Fringe	30.7%	\$ -	\$ 2,516	\$ -	\$ 2,516	\$ -	\$ 5,032	\$ 5,032
Christian Brodbeck Fringe	30.7%	\$ -	\$ 3,420	\$ -	\$ 3,420	\$ -	\$ 6,840	\$ 6,840
Research Engineer Fringe	30.7%	\$ 25,788	\$ -	\$ 26,562	\$ -	\$ 52,350	\$ -	\$ 52,350
Post-Doc1 Fringe	10.9%	\$ 7,848	\$ -	\$ 7,848	\$ -	\$ 15,696	\$ -	\$ 15,696
Post-Doc2 Fringe	10.9%	\$ 7,848	\$ -	\$ 7,848	\$ -	\$ 15,696	\$ -	\$ 15,696
ME PhD1 Fringe	3.9%	\$ 936	\$ -	\$ 936	\$ -	\$ 1,872	\$ -	\$ 1,872
ME PhD2 Fringe	3.9%	\$ 936	\$ -	\$ 936	\$ -	\$ 1,872	\$ -	\$ 1,872
ME PhD3 Fringe	3.9%	\$ -	\$ -	\$ 936	\$ -	\$ 936	\$ -	\$ 936
Total Fringes		\$ 73,499	\$ 22,520	\$ 73,866	\$ 22,520	\$ 147,365	\$ 45,040	\$ 192,405
Total Salaries & Fringes		\$ 447,686	\$ 95,875	\$ 470,199	\$ 95,877	\$ 917,885	\$ 191,752	\$ 1,109,637

Equipment								
		\$ 1,071,068	\$ -	\$ -	\$ -	\$ 1,071,068	\$ -	\$ 1,071,068
Form Alloy L5								
Total Equipment		\$ 1,071,068	\$ -	\$ -	\$ -	\$ 1,071,068	\$ -	\$ 1,071,068
Travel	Purpose of Trip							
TMS		\$ 11,175	\$ -	\$ -	\$ -	\$ 11,175	\$ -	\$ 11,175
ASTM		\$ -	\$ -	\$ 11,175	\$ -	\$ 11,175	\$ -	\$ 11,175
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Travel		\$ 11,175	\$ -	\$ 11,175	\$ -	\$ 22,350	\$ -	\$ 22,350
Participant Support Costs								
Stipends		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Participant Support Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Supplies								
Lab Supplies		\$ 8,530	\$ -	\$ 8,530	\$ -	\$ 17,060	\$ -	\$ 17,060
Powder		\$ 115,000	\$ -	\$ 35,000	\$ -	\$ 150,000	\$ -	\$ 150,000
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Supplies		\$ 123,530	\$ -	\$ 43,530	\$ -	\$ 167,060	\$ -	\$ 167,060
Contractors								
TBD: Specimen Fabrication		\$ 15,000	\$ -	\$ 15,000	\$ -	\$ 30,000	\$ -	\$ 30,000
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Contractors		\$ 15,000	\$ -	\$ 15,000	\$ -	\$ 30,000	\$ -	\$ 30,000
TBD: Engineering Consulting		\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 200,000	\$ -	\$ 200,000
Total Subrecipients		\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 200,000	\$ -	\$ 200,000

Other Expenses								
Software		\$ 29,950	\$ -	\$ 1,950	\$ -	\$ 31,900	\$ -	\$ 31,900
Open Access Publication		\$ 3,350	\$ -	\$ 3,090	\$ -	\$ 6,440	\$ -	\$ 6,440
Mailing/Shipping		\$ 1,065	\$ -	\$ 1,065	\$ -	\$ 2,130	\$ -	\$ 2,130
Calibration & Maintenance: Additive Machines		\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 40,000	\$ -	\$ 40,000
Calibration & Maintenance: MTS Load Frames		\$ 10,000	\$ -	\$ 10,000	\$ -	\$ 20,000	\$ -	\$ 20,000
Calibration & Maintenance: Microscopes		\$ 15,000	\$ -	\$ 15,000	\$ -	\$ 30,000	\$ -	\$ 30,000
Calibration & Maintenance: X-Rays		\$ 15,000		\$ 15,000		\$ 30,000	\$ -	\$ 30,000
Tuition		\$ 4,800	\$ 14,400	\$ 7,200	\$ 21,600	\$ 12,000	\$ 36,000	\$ 48,000
Total Other Expenses		\$ 99,165	\$ 14,400	\$ 73,305	\$ 21,600	\$ 172,470	\$ 36,000	\$ 208,470
Total Direct Costs		\$ 1,867,624	\$ 110,275	\$ 713,209	\$ 117,477	\$ 2,580,833	\$ 227,752	\$ 2,808,585
**MTDC		\$ 716,756	\$ 95,875	\$ 606,009	\$ 95,877	\$ 1,322,765	\$ 191,752	\$ 1,514,517
51%		\$ 365,546	\$ 48,897	\$ 309,065	\$ 48,897	\$ 674,611	\$ 97,794	\$ 772,405
Total (Direct + Indirect Costs)		\$ 2,233,170	\$ 159,172	\$ 1,022,274	\$ 166,374	\$ 3,255,444	\$ 325,546	\$ 3,580,990

**Subcontract Under a Federal Award
Attachment 6
Federal Award Terms and Conditions
Subcontract No. 23-01534**

Contractor has entered into an agreement with the Awarding Agency (the "Prime Contract"). The Prime Contract requires that certain contract provisions be made a part of any subcontract issued by Contractor related to furthering the performance or deliverables required under the Prime Contract. By their terms, not all listed provisions apply to this transaction. Clauses that are not applicable are deemed self-deleting. Contractor may choose to flow down additional clauses when necessary to satisfy Contractor's contractual obligations. By signing this Subcontract, Subcontractor represents and warrants that it is compliant with the requirements set forth below. Subcontractor agrees to flow down all applicable clauses to lower-tier subcontractors and subrecipients. In the event of any conflict among the requirements of clauses applicable to this Subcontract, the most stringent requirements of the clauses will apply.

CONTRACTUAL REQUIREMENTS

1. **Funding Status.** As a condition for receipt of funds available to the Department of Defense, Subcontractor agrees that it is not an institution of higher education (as defined in 32 CFR part 216) that has a policy of denying, and that it is not an institution of higher education that effectively prevents the Secretary of Defense from obtaining for military recruiting purposes: (A) entry to campuses or access to students on campuses; or (B) access to directory information pertaining to students. If Subcontractor is determined, using the procedures in 32 CFR part 216, to be such an institution of higher education during the period of performance of this Subcontract, and therefore to be in breach of this clause, Contractor will cease all payments under this Subcontract, and it may suspend or terminate this Subcontract unilaterally for material failure to comply with the terms and conditions hereof.
2. **Intellectual Property Rights.** Provisions relating to intellectual property rights are set forth in Exhibit A-1 (Intellectual Property Rights) to this Attachment 6, which is attached hereto and incorporated as if fully set forth herein.
3. **Publication.** Subcontractor may issue news releases and other publications concerning the work performed under this Subcontract. In order to avoid disclosure of confidential information and/or loss of patent rights as a result of premature public disclosure of information, Subcontractor will submit all proposed publications and a DD Form 882, Report of Inventions and Subcontracts, to Contractor for review and comment at least sixty (60) days prior to planned submission for publication ("Publication Review Period"). Contractor must notify Subcontractor within the Publication Review Period whether such draft contains information deemed to be confidential or information that, if published, would have an adverse effect on Contractor and/or the Government. In the event of such an objection, the Parties agree to negotiate in good faith an acceptable version of the publication. This obligation shall continue throughout the Term of this Subcontract and for a period of thirty (30) days following expiration and/or earlier termination of this Subcontract.
4. **Foreign Access to Technology.** This paragraph shall remain in effect during the term of the Subcontract and for three (3) years thereafter.
 - a. Definitions
 - i. "Foreign firm or institution" means a firm or institution organized or existing under the laws of a country other than the United States, its territories, or possessions. The term includes, for purposes of this Agreement, any agency or instrumentality of a foreign Government; and firms, institutions or business organizations that are owned or substantially controlled by foreign Governments, firms, institutions, or individuals.
 - ii. "Know-how" means all information including, but not limited to discoveries, formulas, materials, inventions, processes, ideas, approaches, concepts, techniques, methods, computer software, program documentation, procedures, firmware, hardware, technical data, specifications, devices, apparatus and machines.
 - iii. "Technology" means discoveries, innovations, Know-How and inventions, whether patentable or not, including computer software, recognized under U.S. law as intellectual creations to which rights of ownership accrue, including, but not limited to, patents, trade secrets, mask works, and copyrights developed under this Agreement.
 - b. Restrictions on Sale or Transfer of Technology to Foreign Firms or Institutions
 - i. For purposes of this paragraph, a "Transfer" includes a sale of the company and sales or licensing of Technology. Transfers do not include:
 1. Sales of products or components, or
 2. Documentation related to sales or products or components, or

3. Transfer to foreign subsidiaries, joint ventures and other cooperative partners of Subcontractor or Subcontractors' parent corporation for purposes related to this Subcontract, or
4. Transfer which provides access to Technology to a Foreign firm or institution which is an approved source of supply or source for the SOW under this Subcontract provided that such Transfer shall be limited to that necessary to allow the Foreign firm or institution to perform its approved role under this Subcontract.

- ii. Subcontractor shall provide written notice to Contractor of any proposed Transfer to a Foreign firm or institution at least ninety (90) calendar days prior to the proposed date of Transfer. Such notice shall cite this paragraph and shall state specifically what is to be transferred and the general terms of the Transfer. Within sixty (60) calendar days of receipt of Subcontractor's written notification, Contractor shall advise Subcontractor whether it consents to the proposed Transfer.

5. **Technical and Financial Reporting.** Subcontractor shall mark all data delivered with a Distribution Statement D (IAW DoDI 5230.24), as shown below, to denote the extent of availability for distribution, release and disclosure without additional approvals or authorizations.

DISTRIBUTION STATEMENT D. Distribution authorized to the Department of Defense and U.S. DoD contractors only (Critical Technology) (November 08, 2022). Other requests shall be referred to (ATTN: CCDC-GVSC-GVME, Eric Walker, 6501 E. 11 Mile Road, MS 268, Building 200A, Detroit Arsenal, MI 48397-5000).

6. **Prohibition on Using Funds under Grants and Cooperative Agreements with Entities that Require Certain Internal Confidentiality Agreements.**

- a. Subcontractor may not require its employees, contractors, or subrecipients seeking to report fraud, waste, or abuse to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting them from lawfully reporting that waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.
- b. Subcontractor must notify its employees, contractors, and subrecipients that the prohibitions and restrictions of any internal confidentiality agreements inconsistent with subparagraph (i) of this Article are no longer in effect.
- c. The prohibition in subparagraph (a) of this paragraph does not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information. If either Contractor and/or the Awarding Agency determines that Subcontractor is not in compliance with this award provision, it:
 - i. Will prohibit Subcontractor's use of funds under this Subcontract, in accordance with section 743 of Division E of the Consolidated and Further Continuing Resolution Appropriations Act, 2015, (Pub. L. 113-235) or any successor provision of law; and
 - ii. May pursue other remedies available for Subcontractor's material failure to comply with the terms and conditions of this Subcontract.

7. **Conflict of Interest.** The Parties understand and agree that, by its very nature, Subcontractor's role under this Subcontract may create or have the potential to create an actual or perceived organizational conflict of interest ("OCOI"). In the event of such OCOI, the Parties agree that appropriate limitations will be implemented in order to avoid, neutralize, or mitigate the potential OCOI.

8. **Administrative Requirements / Flowdowns.** This Subcontract shall be administered in accordance with, and the Subcontractor shall comply with the *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, Title 2 Code of Federal Regulations §200 et seq. and implemented by the DoD at 2 CFR part 1104 "Interim Grants and Cooperative Agreements Implementation of Guidance in 2 CFR part 200" (79 FR 76047, December 19, 2014, as amended at 85 FR 49506, August 13, 2020). This includes, but is not limited to, the provisions set forth in Exhibit A to this Attachment 6, which is attached hereto and incorporated as if fully set forth herein. The provisions set forth in Exhibit A are not intended to be a complete list of Subcontractor's requirements.

ENVIRONMENTAL NATIONAL POLICY REQUIREMENTS (DECEMBER 2014)

1. Subcontractor must comply with all applicable Federal environmental laws and regulations. The laws and regulations identified in this section are not intended to be a complete list.
 - a. Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821–4846), as implemented by the Department of Housing and Urban Development at 24 CFR part 35. The requirements concern lead-based paint in buildings owned by the Federal Government or housing receiving Federal assistance.
 - b. Endangered Species Act of 1973, as amended (ESA, at 16 U.S.C. 1531 et seq.), and implementing regulations of the Departments of the Interior (50 CFR parts 10–24) and Commerce (50 CFR parts 217–227). Subcontractor also must provide any help we may need in complying with the consultation requirements of ESA section 7 (16 U.S.C. 1536) applicable to Federal agencies or any regulatory authorization we may need based on the award of this grant. This is not in lieu of responsibilities Subcontractor have to comply with provisions of the Act that apply directly to Subcontractor as a U.S. entity, independent of receiving this award.
 - c. Marine Mammal Protection Act of 1972, as amended (MMPA, at 16 U.S.C. 1361 et seq.) and provide any assistance we may need in obtaining any required MMPA permit based on an award of this grant.
2. Subcontractor must immediately identify Contractor and the Awarding Agency any potential impact that Subcontractor finds this Subcontract may have on:
 - a. The quality of the "human environment", as defined in 40 CFR 1508.14, including wetlands; and provide any help we may need to comply with the National Environmental Policy Act (NEPA, at 42 U.S.C. 4321 et seq.), the regulations at 40 CFR 1500–1508, and E.O. 12114, if applicable; and assist us to prepare Environmental Impact Statements or other environmental documentation. In such cases, Subcontractor may take no action that will have an environmental impact (e.g., physical disturbance of a site such as breaking of ground) or limit the choice of reasonable alternatives to the proposed action until we provide written notification of Federal compliance with NEPA or E.O. 12114.
 - b. Flood-prone areas and provide any help we may need to comply with the National Flood Insurance Act of 1968, as amended by the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001 et seq.), which require flood insurance, when available, for federally assisted construction or acquisition in flood-prone areas.
 - c. A land or water use or natural resource of a coastal zone that is part of a federally approved State coastal zone management plan and provide any help we may need to comply with the Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.) including preparation of a Federal agency Coastal Consistency Determination.
 - d. Coastal barriers along the Atlantic and Gulf coasts and Great Lakes' shores and provide help we may need to comply with the Coastal Barrier Resources Act (16 U.S.C. 3501 et seq.), concerning preservation of barrier resources.
 - e. Any existing or proposed component of the National Wild and Scenic Rivers system and provide any help we may need to comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.).
 - f. Underground sources of drinking water in areas that have an aquifer that is the sole or principal drinking water source and in wellhead protection areas, and provide any help we may need to comply with the Safe Drinking Water Act (42 U.S.C. 300f et seq.).

NATIONAL POLICY REQUIREMENTS CONCERNING LIVE ORGANISMS (DECEMBER 2014)

3. Human subjects.

- a. Subcontractor must protect the rights and welfare of individuals who participate as human subjects in research under this award and comply with the requirements at 32 CFR part 219, DoD Instruction (DoDI) 3216.02, 10 U.S.C. 980, and when applicable, Food and Drug Administration (FDA) regulations.
- b. Subcontractor must not begin performance of research involving human subjects, also known as human subjects research (HSR), that is covered under 32 CFR part 219, or that meets exemption criteria under 32 CFR 219.101(b), until Subcontractor receive a formal notification of approval from a DoD Human Research Protection Official (HRPO). Approval to perform HSR under this award is received after the HRPO has performed a review of Subcontractor documentation of planned HSR activities and has officially furnished a concurrence with Subcontractor determination as presented in the documentation.
- c. In order for the HRPO to accomplish this concurrence review, Subcontractor must provide sufficient documentation to enable his or her assessment as follows:
 - i. If the HSR meets an exemption criterion under 32 CFR 219.101(b), the documentation must include a citation of the exemption category under 32 CFR 219.101(b) and a rationale statement.
 - ii. If Subcontractor activity is determined as "non-exempt research involving human subjects", the documentation must include:
 1. Assurance of Compliance (i.e., Department of Health and Human Services Office for Human Research Protections (OHRP) Federal wide Assurance (FWA)) appropriate for the scope of work or program plan; and
 2. Institutional Review Board (IRB) approval, as well as all documentation reviewed by the IRB to make their determination.
- d. The HRPO retains final judgment on what activities constitute HSR, whether an exempt category applies, whether the risk determination is appropriate, and whether the planned HSR activities comply with the requirements in paragraph 1.a of this section.
- e. Subcontractor must notify the HRPO immediately of any suspensions or terminations of the Assurance of Compliance.
- f. DoD staff, consultants, and advisory groups may independently review and inspect Subcontractor research and research procedures involving human subjects and, based on such findings, DoD may prohibit research that presents unacceptable hazards or otherwise fails to comply with DoD requirements.
- g. Definitions for terms used in paragraph 1 of this article are found in DoDI 3216.02.

4. Animals.

- a. Prior to initiating any animal work under the award, Subcontractor must:
 - i. Register Subcontractor research, development, test, and evaluation or training facility with the Secretary of Agriculture in accordance with 7 U.S.C. 2136 and 9 CFR 2.30, unless otherwise exempt from this requirement by meeting the conditions in 7 U.S.C. 2136 and 9 CFR parts 1–4 for the duration of the activity.
 - ii. Have Subcontractor proposed animal use approved in accordance with Department of Defense Instruction (DoDI) 3216.01, Use of Animals in DoD Programs by a DoD Component Headquarters Oversight Office.
 - iii. Furnish evidence of such registration and approval to the grants officer.
- b. Subcontractor must make the animals on which the research is being conducted, and all premises, facilities, vehicles, equipment, and records that support animal care and use available during business hours and at other times mutually agreeable to Subcontractor, the United States Department of Agriculture Office of Animal and Plant Health Inspection Service (USDA/APHIS) representative, personnel representing the DoD component oversight offices, as well as the grants officer, to ascertain that Subcontractor are compliant with 7 U.S.C. 2131 et seq., 9 CFR parts 1–4, and DoDI 3216.01.
- c. Subcontractor care and use of animals must conform with the pertinent laws of the United States, regulations of the Department of Agriculture, and regulations, policies, and procedures of the Department of Defense (see 7 U.S.C. 2131 et seq., 9 CFR parts 1–4, and DoDI 3216.01).
- d. Subcontractor must acquire animals in accordance with DoDI 3216.01.

5. Use of Remedies. Failure to comply with the applicable requirements in paragraphs 1–2 of this section may result in the DoD Component's use of remedies, e.g., wholly or partially terminating or suspending the award, temporarily withholding payment under the award pending correction of the deficiency, or disallowing all or part of the cost of the activity or action (including the federal share and any required cost sharing or matching) that is not in compliance. See OAR Article III.

OTHER NATIONAL POLICY REQUIREMENTS (DECEMBER 2014)

6. Drug-free workplace. Subcontractor must comply with drug-free workplace requirements in Subpart B of 2 CFR part 26, which is the DoD implementation of 41 U.S.C. chapter 81, "Drug-Free Workplace."
7. Officials not to benefit. Subcontractor must comply with the requirement that no member of Congress shall be admitted to any share or part of this award, or to any benefit arising from it, in accordance with 41 U.S.C. 6306.
8. Hatch Act. If applicable, Subcontractor must comply with the provisions of the Hatch Act (5 U.S.C. 1501–1508) concerning political activities of certain State and local government employees, as implemented by the Office of Personnel Management at 5 CFR part 151, which limits political activity of employees or officers of State or local governments whose employment is connected to an activity financed in whole or part with Federal funds.
9. Native American graves protection and repatriation. If Subcontractor control or possess Native American remains and associated funerary objects, Subcontractor must comply with the requirements of 43 CFR part 10, the Department of the Interior implementation of the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C., chapter 32).
10. Research misconduct. Subcontractor must comply with requirements concerning research misconduct in Enclosure 4 to DoD Instruction 3210.7, "Research Integrity and Misconduct." The Instruction implements the Governmentwide research misconduct policy that the Office of Science and Technology Policy published in the Federal Register (65 FR 76260, December 6, 2000, available through the U.S. Government Printing Office website: <https://www.federalregister.gov/documents/2000/12/06/00-30852/executive-office-of-the-president-federal-policy-on-research-misconduct-preamble-for-research>).
11. Historic preservation. Subcontractor must identify to Contractor any:
 - a. Property listed or eligible for listing on the National Register of Historic Places that will be affected by this Subcontract, and provide any help Contractor may need, with respect to this award, to comply with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. 306108), as implemented by the Advisory Council on Historic Preservation regulations at 36 CFR part 800 and Executive Order 11593, "Identification and Protection of Historic Properties," [3 CFR, 1971–1975 Comp., p. 559]. Impacts to historical properties are included in the definition of "human environment" that require impact assessment under NEPA (See NP Article II, Section A).
 - b. Potential under this Subcontract for irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data, and provide any help we may need, with respect to this award, to comply with the Archaeological and Historic Preservation Act of 1974 (54 U.S.C. chapter 3125).
12. Relocation and real property acquisition. Subcontractor must comply with applicable provisions of 49 CFR part 24, which implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. 4601, et seq.) and provides for fair and equitable treatment of persons displaced by federally assisted programs or persons whose property is acquired as a result of such programs.
13. Confidentiality of patient records. Subcontractor must keep confidential any records that Subcontractor maintain of the identity, diagnosis, prognosis, or treatment of any patient in connection with any program or activity relating to substance abuse education, prevention, training, treatment, or rehabilitation that is assisted directly or indirectly under this Subcontract, in accordance with 42 U.S.C. 290dd–2.
14. Pro-Children Act. Subcontractor must comply with applicable restrictions in the Pro-Children Act of 1994 (Title 20, Chapter 68, subchapter X, Part B of the U.S. Code) on smoking in any indoor facility:
 - a. Constructed, operated, or maintained under this award and used for routine or regular provision of kindergarten, elementary, or secondary education or library services to children under the age of 18.
 - b. Owned, leased, or contracted for and used under this award for the routine provision of federally funded health care, day care, or early childhood development (Head Start) services to children under the age of 18.

15. Constitution Day. Subcontractor must comply with Public Law 108–447, Div. J, Title I, Sec. 111 (36 U.S.C. 106 note), which requires each educational institution receiving Federal funds in a Federal fiscal year to hold an educational program on the United States Constitution on September 17th during that year for the students served by the educational institution.
16. Trafficking in persons. Subcontractor must comply with requirements concerning trafficking in persons specified in the award term at 2 CFR 175.15(b), as applicable.
17. Whistleblower protections. Subcontractor must comply with 10 U.S.C. 2409, including the:
 - a. Prohibition on reprisals against employees disclosing certain types of information to specified persons or bodies; and
 - b. Requirement to notify Subcontractor employees in writing, in the predominant native language of the workforce, of their rights and protections under that statute.

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EXHIBIT A

SECTION A: ADMINISTRATIVE REQUIREMENTS

1. **Remedies for Non-Compliance.** If Subcontractor fails to comply with any Applicable Rules, as that term is defined herein, WSU may, at its discretion, impose additional conditions upon Subcontractor including but not limiting to temporarily withholding cash payments pending correction of the deficiency, disallowing all or part of the cost of the activity or action not in compliance, requiring payments as reimbursements rather than advance payments, withholding authority to proceed to the next phase until receipt of evidence of acceptable performance within a given performance period; requiring additional, more detailed financial reports, requiring additional project monitoring, requiring Subcontractor to obtain technical or management assistance, or establishing additional prior approvals. In the alternative, and in its sole discretion, WSU may terminate, in whole or in part, the Order and/or avail itself of any other remedies that may be legally available.
2. **Termination.**
 - a. **For Convenience.** WSU may terminate this Order, in whole or in part, at any time and for any reason, upon ten (10) days written notice to Subcontractor. In the event that Awarding Agency terminates the Prime Contract (or any statements of work issued to Contractor under the Prime Contract), Contractor shall terminate this Subcontract in accordance with the terms of the Prime Contract.
 - b. **For Cause.** WSU may terminate this Order upon written notice to Subcontractor, and such termination shall be effective three calendar days from the date of delivery of such notice, should any of the following occur: (a) Subcontractor becomes insolvent or files for bankruptcy; (b) Subcontractor fails to deliver the goods or services being purchased under this Order within the time specified by this Order or any written extension; (c) Subcontractor fails to make progress or meet any of the progress deadlines, so as to endanger performance of this Order; or (d) if Subcontractor is in breach of any other term of this Order and Subcontractor fails to cure such breach within five (5) business days of receipt of notice of such breach.
 - c. **Procedures Upon Termination.** Upon termination of this Order for any reason, Subcontractor shall (a) stop work immediately on the terminated portion of the Order; (b) terminate all contracts (including but not limited to subcontracts and subawards) related to the termination of the Order; (c) advise the University of any special circumstances precluding stoppage of work; (d) continue to perform the portion of the Order not terminated; (e) take any action necessary to protect property in Subcontractor's possession in which the University has an interest; (f) notify the University of any legal proceedings related to this Order; (g) settle any subcontractor claims arising out of the termination; and (h) dispose of termination inventory as directed by the University. Subcontractor shall be reimbursed for allowable costs and non-cancelable obligations incurred prior to the date of termination and shall furnish all necessary data, deliverables, and final reports, in accordance with Attachments 4 and 5, on the research completed or in progress through the date of termination.
3. **Force Majeure.** Neither party shall be liable to the other for any failure or delay caused by events beyond the party's reasonable control, including, without limitation, a failure to furnish necessary information, sabotage, failures or delays in transportation or communication, failures or substitutions of equipment, labor disputes, accidents, shortages of labor, fuel, raw materials, or equipment, or technical failures (in each case, a "Force Majeure Event"), provided the party that is prevented from carrying out its obligations hereunder (the "Affected Party"): (i) notifies the other party (the "Non-Affected Party") immediately of any Force Majeure Event, and (ii) uses its reasonable best efforts to mitigate and remedy the adverse effects of such a Force Majeure Event. In the event said Force Majeure Event persists for longer than thirty (30) days, WSU shall have the option to terminate this Order and/or the affected SOW, without penalty.
4. **Allowable Costs.** Subcontractor must comply with the provisions set forth under 2 CFR 1128, Appendix C applicable to Subcontractor's specific entity type.
5. **Intellectual Property Rights.** Provisions relating to this section are set forth in Exhibit A-1, which is attached hereto and incorporated as if fully set forth herein.
6. **Access to Records.** To the extent that the Order exceeds the simplified acquisition threshold, Subcontractor shall allow WSU, the Department of Defense (including its Inspector General), and the Comptroller General of the United States, or any of their duly authorized representatives, access to any books, documents, papers, and records of Subcontractor that are directly pertinent to a specific program, for the purpose of making audits, examinations, excerpts, and transcriptions. To the extent that this Order involves audit services for the performance of any audit required by the Single Audit Act, as implemented by OMB in Subpart F of 2 CFR part 200, Subcontractor shall provide

for the access to audit documentation described in 2 CFR 200.517(b).

7. **Records Retention.** Unless WSU specifies a shorter period of time, Subcontractor shall preserve and make available all of its books, documents, papers, records, and other evidence involving transactions related to this Order for a period of three (3) years from the date of the expiration or termination of this Order. Matters involving litigation shall be kept for one (1) year following the termination of litigation, including all appeals, if the litigation exceeds three (3) years. To the extent that this Order involves audit services for the performance of any audit required by the Single Audit Act, as implemented by OMB in Subpart F of 2 CFR part 200, Subcontractor shall retain records in accordance with 2 CFR 200.517(a).

SECTION B: NATIONAL POLICY REQUIREMENTS.

8. **Equal Employment Opportunity.** During the term of this Order, Subcontractor agrees as follows:

- a. Subcontractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. Subcontractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Subcontractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- b. Subcontractor will, in all solicitations or advertisements for employees placed by or on behalf of Subcontractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- c. Subcontractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with Subcontractor's legal duty to furnish information.
- d. Subcontractor will send to each labor union or representative of workers with which Subcontractor has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of Subcontractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- e. Subcontractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- f. Subcontractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to Subcontractor's books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- g. In the event of Subcontractor's noncompliance with the nondiscrimination clauses of this Order or with any of the said rules, regulations, or orders, this Order may be canceled, terminated, or suspended in whole or in part and Subcontractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- h. Subcontractor will include the portion of the sentence immediately preceding section (a) and the provisions of sections (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. Subcontractor will take such

action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event Subcontractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, Subcontractor may request the United States to enter into such litigation to protect the interests of the United States.

- i. Subcontractor further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work; provided that if Subcontractor so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.
 - j. Subcontractor agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.
 - k. Subcontractor further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, Subcontractor agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: cancel, terminate, or suspend in whole or in part this Order (contract, loan, insurance, guarantee); refrain from extending any further assistance to Subcontractor under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from Subcontractor; and refer the case to the Department of Justice for appropriate legal proceedings.
9. **Wage Rate Requirements (Construction), formerly the Davis-Bacon Act.** When required by Federal program legislation, Subcontractor must take the following actions with respect to each construction contract for more than \$2,000 to be awarded using funding provided under this Order: a) place in the solicitation under which the contract will be awarded a copy of the current prevailing wage determination issued by the Department of Labor; b) condition the decision to award the contract upon Subcontractor's acceptance of the prevailing wage determination; c) include in the contract the clauses specified at 29 CFR 5.5(a) in Department of Labor regulations (29 CFR part 5 "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction") to require Subcontractor's compliance with the Wage Rate Requirements (Construction), as amended (40 U.S.C 3141-44, 3146, and 3147); and d) report all suspected or reported violations to the Awarding Agency.
10. **Copeland "Anti-Kickback" Act (40 U.S.C. 3145).** If this Order is in excess of \$2,000 and pertains to construction or repair, Subcontractor shall comply with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that Subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which the employee is otherwise entitled. Subcontractor shall report all suspected or reported violations to WSU and the responsible Federal Awarding Agency.
11. **Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708).** If the Order is in excess of \$100,000 and involves construction and/or other purposes that involve the employment of mechanics or laborers, Subcontractor shall comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, Subcontractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than 1½ times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.
12. **Rights to Inventions Made Under a Contract, Grant or Cooperative Agreement.** If the Order is for the performance of experimental, developmental, or research work, Subcontractor shall provide for the rights of the

Federal Government and WSU in any resulting invention in accordance with 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements."

13. **Clean Air Act (42 U.S.C. 7401—7671q) and the Federal Water Pollution Control Act (33 U.S.C. 1251— 1387), as amended.** If the Order is in excess of \$150,000, Subcontractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401—7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251—1387). Violations shall be reported to the Federal Awarding Agency and the Regional Office of the Environmental Protection Agency (EPA).
14. **Debarment and Suspension (E.O. 12549 and 12689).** Subcontractor represents and warrants that it is not listed on the governmentwide Excluded Parties List System in the System for Award Management (SAM) in accordance with OMB guidelines at 2 CFR Part 180 that implement E.O.s 12549 and 12689, "Debarment and Suspension." This list contains the names of parties debarred, suspended, or otherwise excluded by agencies, and contractors declared ineligible under statutory or regulatory authority other than E.O. 12549. Subcontractor must comply with 2 CFR Part 180, Subpart C and must include a requirement to comply with this regulation in any lower tier covered transaction it enters into. Subcontractor shall have an ongoing duty during the term of this Order to disclose to WSU on an ongoing basis any occurrence that would prevent Subcontractor from making the certifications contained in this section. Such disclosure shall be made in writing to WSU within five (5) business days of when Subcontractor discovers or reasonably believes there is a likelihood of such occurrence. This certification is a material representation of fact relied upon by WSU. If it is later determined that Subcontractor did not comply with 2 CFR Part 180, Subpart C, in addition to remedies available to WSU, the Federal government may pursue available remedies, including but not limited to suspension and/or debarment.
15. **Byrd Anti-Lobbying Amendment (31 U.S.C. 1352, as implemented by the DoD at 32 CFR part 28).** If the Order is for \$100,000 or more, Subcontractor and its subcontractors shall file the certification required by this statute and associated regulations. Subcontractor certifies to WSU that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Subcontractor shall disclose to WSU any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier.
16. **Procurement of recovered materials.** A non-federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. If applicable, Subcontractor shall comply with the requirements of Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
17. **Domestic preferences for procurements (2 CFR 200.322).** As appropriate and to the extent consistent with law, Subcontractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this Section 11 must be included in all subawards including all contracts and purchase orders for work or products under this Order. For purposes of this section: (a) "Produced in the United States" means, for iron and steel products, that all manufacturing processes from the initial melting stage through the application of coatings, occurred in the United States; and (b) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.
18. **Prohibition on certain telecommunications and video surveillance services or equipment (2 CFR 200.216).** Subcontractor must comply with 2 C.F.R. § 200.216, which implements Section 889 of the Fiscal Year (FY) 2019 NDAA (Pub. L. 115-232) and forbids Federal award recipients from using government funds to enter into contracts (or extend or renew them) with entities utilizing covered telecommunications equipment or services. 2 CFR 200.216 prohibits federal award recipients from using government funds to enter into contracts (or extend or renew contracts) with entities that use "covered telecommunications equipment or services," even if the contract is not for the purchase

of such equipment or services. Covered telecommunications equipment or services is defined as telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

19. **Fly America Requirements.** If this Order involves international air travel or transportation for people or property, Subcontractor must:

- a. Comply with the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118, also known as the "Fly America" Act), as implemented by the General Services Administration at 41 CFR 301-10.131 through 301-10.143, which provides that U.S. Government financed international air travel and transportation of personal effects or property must use a U.S. Flag air carrier or be performed under a cost sharing arrangement with a U.S. carrier, if such service is available; and
- b. Include the requirements of the Fly America Act in all subcontracts that might involve international air transportation.

20. **Cargo preference for United States flag vessels.** If this Order involves equipment, material, or commodities being shipped by oceangoing vessels, Subcontractor agrees: (a) to utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this Order, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels; (b) to furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in subsection (a) of this section to WSU and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590; and (c) to insert the substance of the provisions of this paragraph in all subcontracts issued pursuant to this Order.

EXHIBIT A-1
INTELLECTUAL PROPERTY RIGHTS

1. Inventions developed under this award.

- a. Definitions.** Unless otherwise provided herein, the following terms shall have the following meaning, regardless of capitalization.
- i. Invention means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).
 - ii. Subject invention means any invention of the Subcontractor conceived or first actually reduced to practice in the performance of work under this contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of contract performance.
 - iii. Practical Application means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.
 - iv. Made when used in relation to any invention means the conception or first actual reduction to practice of such invention.
 - v. Small Business Firm means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.
 - vi. Nonprofit Organization means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.
 - vii. The term statutory period means the one-year period before the effective filing date of a claimed invention during which exceptions to prior art exist per 35 U.S.C. 102(b) as amended by the Leahy-Smith America Invents Act, Public Law 112-29.
 - viii. The term Subcontractor means any person, small business firm or nonprofit organization, or, as set forth in section 1, paragraph (b)(4) of Executive Order 12591, as amended, any business firm regardless of size, which is a party to a funding agreement.
- b. Allocation of Principal Rights.** The Subcontractor may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Subcontractor retains title, the Federal government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.
- c. Invention Disclosure, Election of Title and Filing of Patent Application by Subcontractor.**
- i. The Subcontractor will disclose each subject invention to the Awarding Agency through WSU within two months after the inventor discloses it in writing to Subcontractor personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Subcontractor will promptly notify the agency through WSU of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Subcontractor.
 - ii. The Subcontractor will elect in writing whether or not to retain title to any such invention by notifying the Awarding Agency through WSU within two years of disclosure to the Awarding Agency. However, in any case where a patent, a printed publication, public use, sale, or other availability to the public has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.
 - iii. The Subcontractor will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein

valid patent protection can be obtained in the United States after a publication, on sale, or public use. If the Subcontractor files a provisional application as its initial patent application, it shall file a non-provisional application within 10 months of the filing of the provisional application. The Subcontractor will file patent applications in additional countries or international patent offices within either ten months of the first filed patent application or six months from the date permission is granted by the Commissioner of Patents to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

- iv. For any subject invention with Awarding Agency and Subcontractor co-inventors, where the Awarding Agency employing such co-inventor determines that it would be in the interest of the government, pursuant to 35 U.S.C. 207(a)(3), to file an initial patent application on the subject invention, the Awarding Agency employing such co-inventor, at its discretion and in consultation with the Subcontractor, may file such application at its own expense, provided that the Subcontractor retains the ability to elect title pursuant to 35 U.S.C. 202(a).
- v. Requests for extension of the time for disclosure, election, and filing under paragraphs (1), (2), and (3) of this clause may, at the discretion of the Awarding Agency, be granted. When a Subcontractor has requested an extension for filing a non-provisional application after filing a provisional application, a one-year extension will be granted unless the Awarding Agency notifies the Subcontractor within 60 days of receiving the request.

d. Conditions When the Government May Obtain Title. The Subcontractor will convey to the Awarding Agency, upon written request, title to any subject invention –

- i. If the Subcontractor fails to disclose or elect title to the subject invention within the times specified in paragraph (c) of this clause, or elects not to retain title.
- ii. In those countries in which the Subcontractor fails to file patent applications within the times specified in paragraph (c) of this clause; provided, however, that if the Subcontractor has filed a patent application in a country after the times specified in paragraph (c) of this clause, but prior to its receipt of the written request of the Awarding Agency, the Subcontractor shall continue to retain title in that country.
- iii. In any country in which the Subcontractor decides not to continue the prosecution of any non-provisional patent application for, to pay a maintenance, annuity or renewal fee on, or to defend in a reexamination or opposition proceeding on, a patent on a subject invention.

e. Minimum Rights to Subcontractor and Protection of the Subcontractor Right to File.

- i. The Subcontractor will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Subcontractor fails to disclose the invention within the times specified in (c), above. The Subcontractor's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Subcontractor is a party and includes the right to grant sublicenses of the same scope to the extent the Subcontractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the Awarding Agency except when transferred to the successor of that party of the Subcontractor's business to which the invention pertains.
- ii. The Subcontractor's domestic license may be revoked or modified by the funding Awarding Agency to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Subcontractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Awarding Agency to the extent the Subcontractor, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
- iii. Before revocation or modification of the license, the funding Awarding Agency will furnish the Subcontractor a written notice of its intention to revoke or modify the license, and the Subcontractor will be allowed thirty days (or such other time as may be authorized by the funding Awarding Agency for good cause shown by the Subcontractor) after the notice to show cause why the license should not be revoked or modified. The Subcontractor has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and agency regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

f. Subcontractor Action to Protect the Government's Interest.

- i. The Subcontractor agrees to execute or to have executed and promptly deliver to the Awarding Agency all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Subcontractor elects to retain title, and (ii) convey

title to the Awarding Agency when requested under paragraph (d) above and to enable the government to obtain patent protection throughout the world in that subject invention.

- ii. The Subcontractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Subcontractor each subject invention made under contract in order that the Subcontractor can comply with the disclosure provisions of paragraph (c) of this clause, to assign to the Subcontractor the entire right, title and interest in and to each subject invention made under contract, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by paragraph (c)(1) of this clause. The Subcontractor shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.
- iii. For each subject invention, the Subcontractor will, no less than 60 days prior to the expiration of the statutory deadline, notify the Awarding Agency of any decision: Not to continue the prosecution of a non-provisional patent application; not to pay a maintenance, annuity or renewal fee; not to defend in a reexamination or opposition proceeding on a patent, in any country; to request, be a party to, or take action in a trial proceeding before the Patent Trial and Appeals Board of the U.S. Patent and Trademark Office, including but not limited to post-grant review, review of a business method patent, inter parts review, and derivation proceeding; or to request, be a party to, or take action in a non-trial submission of art or information at the U.S. Patent and Trademark Office, including but not limited to a pre-issuance submission, a post-issuance submission, and supplemental examination.
- iv. The Subcontractor agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the contract) awarded by (identify the Awarding Agency). The government has certain rights in the invention."
- v. The Subcontractor must submit a final report listing all subject inventions made under the award or stating that there were none. The final report is due 90 calendar days after the end date of the period of performance unless you request, and the Awarding Agency grants, an extension of the due date.

g. Subcontracts.

- i. The Subcontractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work to be performed by a sub-subcontractor. The sub-subcontractor will retain all rights provided for the Subcontractor in this clause, and the Subcontractor will not, as part of the consideration for awarding the subcontract, obtain rights in the sub-subcontractor's subject inventions.
- ii. The Subcontractor will include in all other subcontracts, regardless of tier, for experimental developmental or research work the patent rights clause required by (cite section of agency implementing regulations or FAR).
- iii. In the case of subcontracts, at any tier, when the prime award with the Awarding Agency was a contract (but not a grant or cooperative agreement), the agency, sub-subcontractor, and the Subcontractor agree that the mutual obligations of the parties created by this clause constitute a contract between the sub-subcontractor and the Awarding Agency with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (j) of this clause.

h. Reporting on Utilization of Subject Inventions. The Subcontractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Subcontractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Subcontractor, and such other data and information as the agency may reasonably specify. The Subcontractor also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding undertaken by the agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. 202(c)(5), the agency agrees it will not disclose such information to persons outside the government without permission of the Subcontractor.

i. Preference for United States Industry. Notwithstanding any other provision of this clause, the Subcontractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Awarding Agency upon a showing by the Subcontractor or its assignee that reasonable but unsuccessful efforts have been made

to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

- j. **March-in Rights.** The Subcontractor agrees that with respect to any subject invention in which it has acquired title, the Awarding Agency has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Subcontractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Subcontractor, assignee, or exclusive licensee refuses such a request the Awarding Agency has the right to grant such a license itself if the Awarding Agency determines that:
- Such action is necessary because the Subcontractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.
 - Such action is necessary to alleviate health or safety needs which are not reasonably
 - satisfied by the Subcontractor, assignee or their licensees;
 - Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Subcontractor, assignee or licensees; or
 - Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.
- k. **Special Provisions for Contracts with Nonprofit Organizations.** If the Subcontractor is a nonprofit organization, it agrees that:
- Rights to a subject invention in the United States may not be assigned without the approval of the Awarding Agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Subcontractor;
 - The Subcontractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;
 - The balance of any royalties or income earned by the Subcontractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and
 - It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the Subcontractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Subcontractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Subcontractor. However, the Subcontractor agrees that the Awarding Agency may review the Subcontractor's licensing program and decisions regarding small business applicants, and the Subcontractor will negotiate changes to its licensing policies, procedures, or practices with the Awarding Agency when the Awarding Agency's review discloses that the Subcontractor could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4). In accordance with 37 CFR 401.7, the Awarding Agency or the Subcontractor may request that the Secretary review the Subcontractor's licensing program and decisions regarding small business applicants.
- l. **Invention Reports.** The requirements of this Section 1(l) are in addition to the requirements listed above in Section 1(c). For any invention or discovery that is or may be patentable or otherwise protectable under Title 35 of the United States Code that Subcontractor makes in the performance of work under this Subcontract, Subcontractor shall file an invention reports as of the close of the performance year and at the end of the term for this Subcontract. Annual Reports are due sixty (60) days after the end of each year of performance and Final Reports are due sixty (60) days after the expiration of the final performance period. Subcontractor shall use DD Form 882, Report of Inventions and Subcontracts, to file an invention report. Negative reports are also required. Subcontractor shall submit the original to the TACOM LCMC IP Law Division Chief's office, one copy to the Administrative Grants Officer, and one copy to the Grants Officer. Final payment cannot be made nor can this Subcontract be closed out until Subcontractor delivers to the Government all disclosures of subject inventions required by this Subcontract an acceptable report.

2. Assertion of copyright.

- a. Subcontractor may assert copyright in any work that is eligible for copyright protection if Subcontractor acquires ownership of it under this award, either by developing it or otherwise.
- b. With respect any work, developed by Subcontractor or otherwise acquired by Subcontractor under this award, the Awarding Agency reserves a royalty-free, nonexclusive and irrevocable license to:
 - i. Reproduce, publish, or otherwise use the work for Federal Government purposes; and
 - ii. Authorize others to reproduce, publish, or otherwise use the work for Federal Government purposes.

3. Data produced under the subcontract.

- a. **Data in General.** The Federal Government has the right to:
 - i. Obtain, reproduce, publish, or otherwise use the data produced under this award; and
 - ii. Authorize others to receive, reproduce, publish, or otherwise use the data produced under this award for Federal Government purposes.
- b. **Research data requested under the Freedom of Information Act (FOIA).**
 - i. If the Awarding Agency or Federal Government receives a request under the FOIA for "research data" that are related to "published research findings" produced under this award and that were "used by the Federal Government in developing an agency action that has the force and effect of law," Subcontractor must provide the data to the Awarding Agency or Federal Government within a reasonable time after it is requested so that the data can be made available to the public through procedures established under the FOIA.
 - ii. For purposes of this requirement under Section 3(b) of this section, 2 CFR 200.315(e) provides definitions of the phrases "published research findings," "used by the Federal Government in developing an agency action that has the force and effect of law," and "research data."
- c. **Rights in Technical Data and Computer Software.** Subcontractor is encouraged to develop technologies that shall increase DoD reliance in the future on the commercial technology and industrial base as a source of readily available, reliable and affordable components, subsystems, computer software, manufacturing processes, and other technological products for military systems. For technical data and/or computer software developed (or co-developed) by Subcontractor or its sub recipients under this Subcontract, Subcontractor and its sub recipients shall retain title to the intellectual property, and the Government shall have a world-wide, non-exclusive, non-transferable, irrevocable, and paid-up intellectual property license to practice or have practiced the intellectual property on behalf of the United States.
- d. **Marking.** Subcontractor is responsible for affixing appropriate markings indicating rights on all computer software and technical data that is delivered under this Subcontract. The Government shall be deemed to have Unlimited Rights (in accordance with DFARS 252.227-7013 and 252.227-7014) in all computer software and technical data delivered without markings. Subcontractor shall ensure that all technical data and computer software delivered under this Subcontract is marked with the following legend:

Use, duplication, or disclosure is subject to the restrictions as stated in the Cooperative Agreement No. W56HZV-22-2-0001 between the U.S. Government and Wichita State University.

4. Use and disposition of intangible property acquired, but not developed or produced, under the award.

- a. **Applicability.** This section applies to a patent, patent application, copyright, or other intangible property acquired, but not developed or produced, under this award.
- b. **Use.** Subcontractor:
 - i. Must use the intangible property for the authorized purpose under this award until the intangible property is no longer needed for that purpose, whether or not that purpose is still being supported by this award.
 - ii. May not encumber the intangible property without the prior written approval of the administration office from the Awarding Agency.
- c. **Disposition.** When the intangible property is no longer needed for the originally authorized purpose, Subcontractor must contact the administration office of the Awarding Agency to arrange for disposition in accordance with the procedures specified for disposition of equipment in either Section 1 or 4 of this Attachment, as applicable.

5. **Patent or Copyright Infringement.** Subcontractor agrees not to hold the Awarding Agency or Contractor responsible for any and all patent or copyright infringement cases which may arise under any research projects under this Subcontract. In addition, Subcontractor shall indemnify Contractor and the Awarding Agency against all claims and proceedings for actual or alleged direct or contributory infringement of, or inducement to infringe, any U.S. patent, or copyright arising under this Subcontract; Subcontractor shall hold the Awarding Agency and Contractor harmless from any resulting liabilities and losses provided Subcontractor is reasonably notified of such claims and proceeding.

DRAFT

**Subcontract Under a Federal Contract
Appendix A
Subcontract No. 23-01534**

(Subrecipient Name for Header)

Date: _____
Invoice # _____ Award # _____
Project Title: _____
Award Period (POP): _____
Period Covered by this Request: _____

Budget Categories	REIMBURSABLE			
	Budget	Current Expenditures	Cumulative Expenditures	Unexpended Balance
Personnel				
Fringe Benefits				
Travel				
Equipment				
Supplies				
Vendor Contracts				
Subrecipients				
Other Direct Costs				
Total Direct Costs	\$ -	\$ -	\$ -	\$ -
Indirect Costs @ ____%				
Indirect Costs @ ____%				
Grand Total	\$ -	\$ -	\$ -	\$ -

By signing this report, I certify to the best of my knowledge and belief that the report is true, complete and accurate, and the expenditures, disbursements and cash receipts are for the purposes and objectives set forth in the terms and conditions of the Federal award. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise, (U.S. Code Title 18, Section 1001 and Title 31, Sections 3729-3730 and 3801-3812).

Signature: _____

Printed Name: _____

Title: _____