

**The Department of Homeland Security (DHS)
Notice of Funding Opportunity (NOFO)
Domestic Nuclear Detection Office: Nuclear Forensics Research Award**

NOTE: If you are going to apply for this funding opportunity and have not obtained a Data Universal Numbering System (DUNS) number and/or are not currently registered in the System for Award Management (SAM), please take immediate action to obtain a DUNS Number, if applicable, and then to register immediately in SAM. It may take 4 weeks or more after you submit your SAM registration before your registration is active in SAM, then an additional 24 hours for Grants.gov to recognize your information. Information on obtaining a DUNS number and registering in SAM is available from Grants.gov at: <http://www.grants.gov/web/grants/register.html> Detailed information regarding DUNS and SAM is also provided in Section D of this NOFO, subsection, Content and Form of Application Submission.

A. Program Description

Issued By

U.S. Department of Homeland Security (DHS) Domestic Nuclear Detection Office (DNDO) /National Technical Nuclear Forensics Center (NTNFC)

Catalog of Federal Domestic Assistance (CFDA) Number

97.130

CFDA Title

National Nuclear Forensics Expertise Development Program

Notice of Funding Opportunity Title

Nuclear Forensics Research Award

NOFO Number

DHS-17-DN-130-NFRA-001

Authorizing Authority for Program

Section 4(a)(12) of the Nuclear Forensics and Attribution Act (Pub. L. No. 111-140)

Appropriation Authority for Program

Department of Homeland Security Appropriations Act, 2017, (P.L. No. 115-31), Division F, Title IV, Domestic Nuclear Detection Office – Research and Development

Program Type
New

Program Overview, Objectives, and Priorities

Overview. The National Technical Nuclear Forensics Center (NTNFC) was established on October 1, 2006, within the Domestic Nuclear Detection Office (DNDO) of the U.S. Department of Homeland Security (DHS). NTNFC was tasked with two core missions: to provide national-level integration, centralized planning, and stewardship for the National Technical Nuclear Forensics (NTNF) community; and to lead the U.S. Government (USG) in establishing a robust and enduring pre-detonation radiological/nuclear materials forensics capability. A top priority of DNDO/NTNFC's stewardship mission is to lead USG efforts in addressing the enduring challenge of sustaining a preeminent Nuclear Forensics (NF) workforce.

The National Nuclear Forensics Expertise Development Program (NNFEDP) works to build a nuclear forensics workforce of recognized technical experts and leaders through fostering scholastic and research collaboration between and among academia, the national and defense laboratories, and the National Technical Nuclear Forensics (NTNF) Interagency. The implementation of the NNFEDP supports the Department of Homeland Security's ongoing priority to prevent "Nuclear Terrorism Using an Improvised Nuclear Device" as outlined in the 2014 Quadrennial Homeland Security Review and fulfills the requirements outlined in the Nuclear Forensics and Attribution Act (Pub. L. No. 111-140) signed by President Obama on February 16, 2010.

In order to accomplish this mandate, the following initiative has been implemented: The Nuclear Forensics Research Award (NFRA) supports the establishment of a team of faculty, students, and technical staff at the national or defense laboratories to conduct research in the field of nuclear forensics.

Objectives.

1. *Recruit and produce a new generation of leaders and technical experts in a wide-range of fields relevant to nuclear forensics.*

The NFRA is designed to link a qualified graduate student with a nuclear forensics-relevant research project, which will serve as the basis of his or her thesis and be completed through work at a partner laboratory and the student's home university. Through faculty and laboratory staff participation, a collaborative research process is established through which this graduate fellow is jointly mentored by a senior member within nuclear forensics, further enhancing his or her understanding of their technical discipline and its application to the nuclear forensics field.

The NFRA sponsors one or more graduate fellows per award to pursue Ph.D. - level research within the nuclear forensics field. The award includes full tuition and a stipend

of \$3,000 per month renewable for up to 60 months, or five years. To maintain eligibility for the fellowship, students must meet requirements outlined in the Terms of Appointment (TOA) in Appendix A. To maintain eligibility, the graduate student(s) will be required to spend at least nine weeks performing hands-on research at the collaborating laboratory as well as maintain a minimum of a 3.3 out of 4.0 grade point average (GPA). The Graduate Fellow supported by the NFRA must be identified prior to award.

Additionally, the NFRA sponsors the participation of one or more undergraduate student(s). The undergraduate student(s) will be paid a stipend of \$10,000 per year for their contributions. The undergraduate student(s) may remain on the research project as long as eligibility requirements are met. Eligibility is based on the undergraduate student pursuing a relevant field of study, maintenance of a 3.3 of 4.0 GPA, and requirement to spend at least nine weeks performing hands-on research at the collaborating laboratory.

2. Enhance the ability for universities and the national and defense laboratories to work collaboratively on advanced research in the nuclear forensics field.

The NFRA is designed to facilitate a multi-year process to build long-term collaborative partnerships among the laboratories, universities, and the next generation of nuclear forensics experts. These partnerships will provide universities opportunities to participate in research that directly supports USG NF strategic goals.

The Faculty Principle Investigator (PI) will directly oversee the university's participation in the research project and will make joint decisions with the Laboratory PI concerning the path of the project. Multi-university proposals with a collaborative laboratory partner are allowable under the NFRA structure.

Key Personnel. Key Personnel under the NFRA include the university faculty PI or co-PI, national or defense laboratory co-PI, and identified Graduate Fellow(s). All Key Personnel should be U.S. Citizens at the time of application. More information can be found in Section C, Eligibility.

Obligations. Upon graduation, the named graduate fellow(s) is obligated to serve for two years in a postdoctoral or staff position at a national or defense laboratory or federal department or agency in the field of nuclear forensics.

In accordance with the Nuclear Forensics and Attribution Act, should the Graduate Fellow not agree to or comply with the TOAs, he or she must repay the fellowship in total to the USG. The fellowship total to be repaid includes both the stipend and tuition, with interest per the prevailing rate of graduate student loans at the time the student received the award. More information can be found in Appendix A.

Technical Priorities. NF addresses a diverse set of topics related to the collection, analysis, and evaluation of pre-detonation (intact) and post-detonation (exploded) radiological or

nuclear materials, devices, and debris, as well as the immediate effects created by a nuclear detonation. Each grant application will be evaluated based on the information provided in Evaluation Criteria under the Application Review Information section. The Technical Mission Areas (TMA), included below, reflect the technical priorities of the NNFEDP and NFRA and should be addressed when developing a research project.

TMA 1. Pre-Detonation Material and Device Signatures

Physical, chemical, and isotopic characteristics of a radiological or nuclear material can be used to determine aspects of the material's history and are therefore important to nuclear forensics. In general, a nuclear forensic signature is a set of measurable characteristics that points to the origin or history of a sample, and may specifically include or exclude the sample from a specific class or category of materials. Physical signatures may include morphology, texture, size, and shape of a material or parts of the device. Chemical signatures may include the elemental or molecular form of the material (e.g., uranium dioxide, plutonium oxalate) and abundances of impurities in the sample. Isotopic signatures reflect the isotopic composition of a sample (indicating its enrichment, burnup, intended or actual use) and may be used to derive the time since the material was last processed chemically. The R&D focus in these areas includes production, acquisition, and/or retrieval of radiological and nuclear materials of historical interest; laboratory analysis of the materials to document their characteristics; development of production and processing models relating processing parameters (chemical, physical, engineering, machining) to observed product characteristics; assessment of which characteristics persist through (or are modified by) various stages of the production, storage, and transport processes; development of libraries of material characteristics; and ultimately evaluation of material characteristics (or combination of characteristics) for their uniqueness or value as nuclear forensics signatures.

TMA 2. Pre-Detonation Analysis Methods and Tools

While current methods of sample analysis and data interpretation provide a highly sophisticated level of material characterization and classification, even more advanced methods are required to identify new signatures and enable new insights into material provenance. R&D priorities in this area include development of new laboratory analytical methods for determination of spatially and/or temporally distinct features in radiological and nuclear materials; analytical methods that enable determination of new (i.e., previously unrecognized) characteristics and signatures in rad/nuc materials; mathematical and statistical methods to identify and evaluate correlated material characteristics; modeling and simulation tools to predict forward and inverse relationships between physical/chemical material production processes and measurable characteristics; data visualization methods to enable improved interpretation of data relationships; and data management and knowledge capture tools to enable efficient storage, retrieval, and interpretation of diverse sets of material information.

TMA 3. Post-Detonation Material Collection and Analysis Methods

Post-detonation material R&D explores novel methods and advancements in the ability to collect samples of material, analyze radioactive debris, and identify signatures from debris

analysis. The overall goal is to obtain accurate debris characterization more rapidly than is currently possible, and to do so in all environments and conditions. Chronologically, this starts with targeted airborne and ground collection methods that are robust under a wide variety of adverse conditions. Methods with the potential to enable remote characterization and quantification of airborne debris are of interest, as are methods that combine collection and analysis, and field deployable systems, with real-time analysis capability. Following sample collection, improved methods are sought for rapid dissolution and pre-concentration of post-detonation debris using environmentally friendly, potentially field deployable, techniques on a reasonable time scale. The R&D focus for sample analysis includes non-destructive analytical techniques; innovations that rapidly identify and quantify elemental and isotopic constituents (major, minor, and trace) in fresh radioactive fallout debris; and fundamental phenomenology of laser spectroscopy, mass spectrometry, and associated ionization methods. Improvements are also sought in data handling methodologies for compiling, assessing, and interpreting large sets of data; advancing the treatment of data uncertainties; and improving databases of physical constants, such as nuclear cross sections, decay branching ratios, or nuclear energy levels relevant to nuclear forensic analysis.

TMA 4. Post-Detonation Prompt Signal Analysis

Post-detonation prompt signal analysis explores R&D that may enable accurate knowledge of the specifics of a nuclear device (e.g., special nuclear material type and mass, device sophistication, etc.) after a detonation. Ideally this knowledge would be available in as short a time as possible with a high degree of confidence. This topic investigates basic physical research on the prompt signatures of nuclear explosive events, such as novel methods for yield determination, device reaction history, or the radiation outputs of these nuclear explosions. Research could focus on the understanding of unique identifiers of these explosions, measurements of these identifiers, or other topics. In this context, prompt signatures indicate those which can be measured instantaneously to within a few days after the event. These signatures are generally separate from radiochemical signatures.

B. Federal Award Information

Award Amounts, Important Dates, and Extensions

Available Funding for the NOFO: \$250,000 (subject to the availability of funds) per year for two years

Projected number of Awards: One (1)

Period of Performance: 24 months, with an additional three 12 month options. DHS anticipates the period of performance of awards to range from two to no more than five program years with each program year set at 12 months. Extensions – Refer to Section H.

Projected Period of Performance Start Date(s): 08/01/2018

Projected Period of Performance End Date(s):

07/31/2020

Funding Instrument - Cooperative Agreement

The Program Office will have substantial involvement in the administration of the award, including tracking of faculty and student participants, publications, patents, and research progress. The recipient will be required to maintain close and regular interaction with the Program Office, including: a) quarterly and annual reports providing updates on the research, graduate student progress, and any issues related to students, universities, or laboratories involved in the program, b) quarterly financial reporting including funding levels and expenditures, and c) regular in-person or virtual meetings to discuss award progress.

C. Eligibility Information

Eligible Applicants

The following entities below are eligible to apply for this NOFO:

- Private institutions of higher education
- Public & State controlled institutions of higher education

Eligibility Criteria

Organization Limit. The following listed below are organizations that are eligible and encouraged to submit a proposal:

- Universities. Universities accredited by a U.S. Department of Education recognized accrediting agency, and having a campus located in the U.S.

Principal Investigator (PI) Limit. None Specified

Limit on Number of Proposals per Organization. None Specified

Limit on Number of Proposals per Key Personnel/Participant. One (1). An individual researcher may not be named as Key Personnel or Participant on more than one proposal submitted to this Solicitation. This limitation includes participation as a PI, co-PI, senior researcher, consultant, or any other role for which financial remuneration is requested. Failure to adhere to this requirement will result in immediate disqualification.

Other Eligibility Criteria

DHS will not consider applications that do not adhere to one or more of the following requirements:

1. **Deadlines.** DHS will not accept late applications. Without exception, applications must be received by Grants.gov on or before the deadline in this announcement or they will not be considered.
2. **Application relevance.** Applications that do not address the purpose of this announcement will not be considered.
3. **Compliance and completeness.** Applications must substantially comply with the application submission instructions and requirements in this announcement or they will not be considered.

4. **Citizenship.** All Key Personnel/Participants must be U.S. citizens at the time of proposal submission.
5. **Clearance Eligibility.** All Key Personnel/Participants must be eligible to obtain and/or maintain a clearance if requested by the Program Office.
6. **University Programs.** Universities must have a doctorate-level programs in chemistry, physics, engineering, computer science, mathematics, geology, or materials, environmental, and atmospheric science. Applications must include active participation from these doctoral programs.

Maintenance of Effort (MOE)

There is no maintenance of effort requirement for this program. Requests for funds under this announcement shall not be used to take the place of activities described in the application that are currently supported with other funding. Also, grant funds shall not be used to support activities that are a normal part of the organization's operations.

Cost Share or Match

N/A

D. Application and Submission Information

Key Dates and Times

Date Posted to Grants.gov:	09/15/2017
Application Submission Deadline:	01/31/2018 at 11:59:59 PM EDT
Anticipated Funding Selection Date:	06/01/2018
Anticipated Award Date:	08/01/2018

Late applications will not be reviewed nor considered.

Other Key Dates

Event	Suggested Deadline For Completion
Obtaining DUNS Number	Four weeks before actual submission deadline
Obtaining a valid EIN	Four weeks before actual submission deadline
Updating SAM registration	Four weeks before actual submission deadline
Starting application in Grants.gov	One week before actual submission deadline

Address to Request Application Package

Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov> , select "Applicants" then "Apply for Grants." In order to obtain the application package select "Download a Grant Application Package." Enter the CFDA and/or the funding opportunity number

located on the cover of this NOFO, select “Download Package,” and then follow the prompts to download the application package.

For a hardcopy of the full NOFO, please write or email a request to:

Shareef Prater
Grants and Financial Assistance Division
245 Murray Lane SW, Mail Stop 0115
Washington, D.C. 20528-0115
Office: 202.447.5903
Email: Shareef.Prater@HQ.DHS.GOV

Content and Form of Application Submission

Mandatory forms must be completed for this announcement, including the SF-424 (Application for Federal Assistance), SF-424A (Budget), and other forms in accordance with the application instructions on Grants.gov and additional instructions below. If submitting any information that is deemed proprietary, please denote the beginning and ending of such information with asterisks (***)

MANDATORY FORMS

- **SF424 (R&R) Application for Federal Assistance (SF424-V2.0)**

Please complete this form in its entirety. If you fill this form out first, other required forms will populate with basic data such as name, address, etc. Signature and date will auto-fill when you submit the application package through Grants.gov.

- a. Block 1, Type of Submission – Please check “Application.”
- b. Block 8, Type of Application – Please check “New.”
- c. Block 12, Proposed Project – Enter Dates of Entire Project Period
- d. Block 15a, Estimated Project Funding – Please enter \$500,000
- e. Block 16, E.O. 12372 review question – Please check “No.”
- f. Block 17 - By submitting this application, your organization is providing certifications and assurances regarding:
 - i. Drug-Free Workplace Requirements
 - ii. Debarment, Suspension, and Other Responsibility Matters—Primary Covered Transactions
 - iii. Assurance that your organization is not delinquent on any Federal debt.

- **Research & Related (R&R) Budget**

An R&R Budget is required for ALL applications. Please ensure that the total amount requested corresponds to Block 15.a on the SF 424 R&R form. Include two and up to five annual budgets, one for each year of the duration of the award; a cumulative budget will be automatically generated by Grants.gov. A detailed budget justification (up to three pages) should document proposed expenses. Multi-university proposals should use the award-sub award proposal mechanisms or the collaborative mechanism. Attach an expanded equipment list (see item C on R&R Budget Form) if necessary.

Funds must be included in each year of the proposal budget for attendance at an annual meeting as required by the Program Office, as described under Funding Restrictions. For budgetary purposes, the workshop may be assumed to be in the U.S. and be up to four days duration. This workshop will be a primary mechanism for the Program Office and other NTNF interagency partners to assess progress and mitigate any issues on individual projects.

- **Budget Justification**

A Budget Justification is required for all applications. Please ensure that items listed in the budget justification correspond to the funds requested on the R&R Budget form. Attach the Budget Justification to the R&R Budget form. If you need to attach more than one file to fully capture your budget justification, you may use the optional “Attachments” form.

Please use the following guidance when assembling your budget justification:
Use the following cost categories to group items of cost in your budget justification.

PERSONNEL

FRINGE BENEFITS

TRAVEL

EQUIPMENT (see item C on R&R Budget Form)

SUPPLIES (see item F.1 on R&R Budget Form)

CONTRACTUAL (see item F.5 on R&R Budget Form)

OTHER DIRECT COSTS (see items under item F on R&R Budget Form)

INDIRECT COSTS

If you wish to display your budget justification by task, please ensure that you supply a total for each of the cost categories listed above (and related fields on the R&R Budget Form) for the proposed budget period in your application.

- **Project/Performance Site Location(s)**

Please provide information for every site (including any subcontractors with sub-awards or subcontracts of \$25,000 or more) in your project.

- **SF 424B Assurances for Non-Construction Programs**

Submit this form. It will be electronically signed upon submission to Grants.gov as part of your application.

- **Certification Regarding Lobbying (GG_Lobbying Form-V1.1)**

Submit this form. If paragraph two of the certification applies, then complete and submit the SF-LLL Disclosure of Lobbying, which is provided as an optional form in the application package.

- **Research & Related Senior/Key Person Profile**

Please supply biographical information on Key Personnel. The files can be attached at item 12 on the “Other Project Information Form”, or use the optional “Attachments” form.

Proposal Preparation Instructions:

1. Cover Sheet:

The cover sheet is provided in Appendix B. Note: for a proposal ID, please follow the following naming convention:

NTNFNOFO18-XXXX-YYYY-TMA-0#-0##

XXXX = four letter (maximum 4 letter) character shortcut for organization name

YYYY = four letter (maximum 4 letter) character shortcut for department/division name

= Technical Mission Area number

= number of proposal submission

Example: Organization A, Dept. B's submission for its first proposal to topic 01 would have the ID listed: ORGA-DEPB-TMA-01-001

2. Project Summary

This space is limited to 200 words or less. Applicants should provide an overview of the research project and how PIs will effectively conduct the research as a team, integrating the graduate fellow and undergraduate participant. All highlights of the proposal should be listed here. The information provided on the Summary Page may be used as a public information document. Please do not include any proprietary information in this section of the application.

3. Project Narrative:

This is the main body of the application and should provide clear and specific statements regarding the proposed research. This section should demonstrate the applicant's understanding of nuclear forensics as an applied science and how the proposed program aligns with USG TMAs as outlined on pages three-five.

Describe the goals of the proposed research, approaches and methodologies to attain the goals, and the expected impacts. The narrative should include how the university and national or defense laboratory will jointly manage the proposed research project, to include student participation. Please include a proposed project timeline, listing milestones as appropriate.

Also articulate how the research project will offer opportunities for underrepresented minority groups and women, if applicable. The description of work should demonstrate congruency with the Evaluation Criteria (please refer to Section E).

High-risk proposals with the potential for high impact are encouraged. Submissions of this nature should address risk mitigation. The Management Plan, Project Narrative, and References Cited sections are limited to a total of ten (10) pages. The

following sections on Key Personnel and the Mentoring Plan are limited to a total of five (5) pages.

4. Proposed Research: Narrative consisting of the following items:

- An explanation of the scientific context, intellectual merit, and relevance to the technical mission areas on pages three-five and timeliness of the proposed project;
- A detailed description of the proposed research, its goals, objectives and milestones, and any substantive risks and risk mitigation strategies;
- A detailed explanation, as appropriate, on the expected impact to the speed, accuracy, and precision of nuclear forensics analysis;
- If appropriate, a discussion of the multidisciplinary approach taken and its proposed benefits;
- A description of the contribution to the research project to be made by each Key Personnel, to include the Graduate Fellow, Laboratory PI, and partner university PI
- A description of how project progress will be tracked and continuously evaluated both quantitatively and qualitatively;
- A timeline for the planned work;
- Key program milestones; and
- If the proposed research project is multi-university, an explanation regarding the interrelated objectives of the individual efforts.

5. Management Plan: Narrative describing:

- Demonstration of effective and appropriate financial controls, budget processes, administrative oversight, and personnel management;
- How the project will be coordinated, including any use of cyberinfrastructure;
- How decisions will be made regarding the conduct of the project; and
- How the effectiveness of the collaboration will be evaluated.

6. Mentoring Plan: Narrative describing:

- Establishment of a mentoring process, including goals, defining roles and responsibilities, and describing communication methods for co-mentoring of the Graduate Fellow and undergraduate scholar;
- How the design will be implemented; and
- How the effectiveness of mentoring will be evaluated.

7. References Cited:

- References should include full titles of articles and book chapters cited. This section should include bibliographic citations only and must not be used to provide parenthetical information outside of the project description. Indicate with an asterisk (*) references co-authored by two or more proposal investigators.

8. Formatting: The format applies to items 2-6 above:

- a. Margins – Margins for length and width should be at least one (1) inch.
- b. Page formatting – Use standard, single-column format.
- c. Figures, Tables, Diagrams – Use captions and appropriate references with at least size 10 font for caption descriptions.
- d. Spacing – Use least single spacing (for size 12 font and higher) and use single and a half (for size 11)
- e. Font and size (except for item c above) - Use Calibri or Times New Roman font at size 11 or larger.

Unique Entity Identifier and System for Award Management (SAM)

DHS is participating in the Grants.gov initiative that provides the grant community a single site to find and apply for grant funding opportunities; therefore, applicants with electronic access are to submit their applications electronically through <http://www.grants.gov/web/grants/applicants/apply-for-grants.html>. Before you can apply for a DHS grant at grants.gov, you must have a DUNS number, be registered in SAM, and be approved as an Authorized Organizational Representative (AOR).

Applicants are encouraged to register early. The registration process can take four weeks or more to be completed. Therefore, registration should be done in sufficient time to ensure it does not impact your ability to meet required submission deadlines.

DUNS number. Instructions for obtaining a DUNS number can be found at the following website: <http://www.grants.gov/web/grants/applicants/organization-registration/step-1-obtain-duns-number.html>. The DUNS number must be included in the data entry field labeled "Organizational DUNS" on the Standard Forms (SF)-424 forms submitted as part of this application.

System for Award Management. In addition to having a DUNS number, applicants applying electronically through Grants.gov must register with SAM. Step-by-step instructions for registering with SAM can be found here: <http://www.grants.gov/web/grants/applicants/organization-registration/step-2-register-with-sam.html>. Failure to register with SAM will result in your application being rejected by Grants.gov during the submissions process.

Authorized Organizational Representative. The next step in the registration process is creating a username and password with Grants.gov to become an AOR. AORs will need to know the DUNS number of the organization for which they will be submitting applications to complete this process. Applicants must register the individual who is able to make legally binding commitments for the applicant organization as the AOR; this step is often missed and it is crucial for valid submissions. To read more detailed instructions for creating a

profile on Grants.gov visit:

<http://www.grants.gov/web/grants/applicants/organization-registration/step-3-username-password.html>.

AOR Authorization. After creating a profile on Grants.gov, the E-Biz Point of Contact (POC), who is a representative from your organization listed as the contact for SAM, will receive an email to grant the AOR permission to submit applications on behalf of their organization. The E-Biz POC will then log in to Grants.gov and approve an individual as the AOR, thereby giving him or her permission to submit applications. After you have been approved as an AOR you will be able to submit your application online. To learn more about AOR Authorization, visit: <http://www.grants.gov/web/grants/applicants/organization-registration/step-4-aor-authorization.html>. To track AOR status, visit: <http://www.grants.gov/web/grants/applicants/organization-registration/step-5-track-aor-status.html>.

Electronic Signature. Applications submitted through Grants.gov constitute a submission as electronically signed applications. When you submit the application through Grants.gov, the name of your AOR on file will be inserted into the signature line of the application.

If you experience difficulties accessing information or have any questions please call the [grants.gov](http://www.grants.gov) customer support hotline at (800) 518-4726 or email [grants.gov](mailto:support@grants.gov) at support@grants.gov.

The Federal awarding agency may not make a Federal award to an applicant until the applicant has complied with all applicable DUNS and SAM requirements and, if an applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

Funding Restrictions

Award Size: DHS intends to fund one (1) award in 2018.

Funding under the NFRA will be the following:

- University research support will be funded at \$250,000 per year for two years, with an additional three option-years based on performance.

National or defense laboratory collaborators will be funded \$150,000 per year through a separate IAA process. The Program Office will engage the collaborative laboratory to collect budget-specific information. No information aside from general contact information as well as a resume for the Laboratory PI/co-PI is required from the laboratory in the University proposal.

Students: The Graduate Fellow(s) and the undergraduate scholar(s) supported under this project are classified as trainees and must be United States citizens.

Kick-Off: This meeting will be held remotely or on-site to discuss in detail the technical and programmatic aspects of the proposed research. This will include but is not limited to a review of the program, personnel, milestones, anticipated entrance/exit criteria for each yearly award period, and expected government deliverables.

Annual Technical Review: An annual Technical Review will enable the awardees to review progress, exchange information, and promote and foster collaboration within the nuclear forensics community. It is required that all PIs and the Graduate Fellow attend and participate in these meetings in their entirety.

Publications and Press Releases: All public-facing materials which discuss work completed under the NFRA including, but not limited to, publications, abstracts, presentations, media releases, and interviews, must be approved for public release by the Program Office. The Program Office requires 10 business days to review any material in advance of submission.

Foreign Travel: Foreign travel required in the performance of the duties approved in this award must be approved by DHS in advance and in writing and comply with the applicable OMB Cost Principles Circular. Requests for foreign travel identifying the traveler, the purpose, the destination, and the estimated travel costs must be submitted to the DHS Program Office 60 days prior to the commencement of travel.

Management and Administration (M&A) Costs. M&A costs are allowable by the recipient and sub-recipients. M&A costs are not operational costs but are necessary costs incurred in direct support of the grant or cooperative agreement or as a consequence of it, such as travel, meeting-related expenses, and salaries of full/part-time staff in direct support of the program. As such these can be itemized in financial reports.

Indirect Facilities & Administrative (F&A) Costs. Indirect Cost (IDC) is allowable by the recipient and sub-recipients. IDC is based on a federally approved and negotiated rate. Please provide a copy of the negotiated rate approved by the applicant's cognizant agency at the time of application. Indirect costs on sub-awards are limited to the first

25,000 of direct costs.

Other Submission Requirements. All files submitted in the application shall be in .pdf format. Limit filenames to 50 characters.

E. Application Review Information

Application Evaluation Criteria

Prior to making a Federal award, the Federal awarding agency is required by 31 U.S.C. 3321 and 41 U.S.C. 2313 to review information available through any OMB-designated repositories of government-wide eligibility qualification or financial integrity information. Therefore application evaluation criteria may include the following risk based considerations of the applicant: (1) financial stability; (2) quality of management systems and ability to meet management standards; (3) history of performance in managing federal award; (4) reports and findings from audits; and (5) ability to effectively implement statutory, regulatory, or other requirements.

The application will be evaluated by an interagency body of nuclear forensics experts against three evaluation criteria, listed below. All three criteria are of equal importance.

Criteria I: Intellectual Merit and Technical Approach

The following elements will be considered upon evaluation:

- The application is responsive to the TMAs outlined in the Technical Priorities Section.
- The intellectual merit of the proposed research will serve to advance knowledge and understanding within the related technical field and/or across multiple related disciplines.
- The proposed University PI(s) and National/Defense Laboratory Co-PI have the necessary experience and expertise to conduct the proposed research, and the National/Defense Laboratory is the appropriate partner for the proposed research.
- The proposed research project addresses at least the following in a clear and complete manner: goals, schedule, methodology, potential risks, and expected impact. Impact of the research will improve the speed, accuracy, and precision of nuclear forensics analysis and potentially address an R&D or operational need within the community.
- The proposed research exhibits creative, original (non-duplicative), innovative, and/or potentially transformative concepts.
- The dissemination of the results will enhance scientific and technological understanding that may be beneficial to the nuclear forensics community.

Criteria II: Student Component

The following elements will be considered upon evaluation:

- The proposed Graduate Fellow is pursuing or planning to pursue doctoral study in specialties directly relevant to nuclear forensics, which include, but are not limited to:
 - Analytical, Geo- and Radio- Chemistry;
 - Nuclear or General Physics;
 - Material Science;
 - Nuclear Engineering;
 - Computer Science;
 - Geology; and
 - Mathematics.
- The proposed Graduate Fellow has at least 36 months of graduate work remaining at the beginning of the period of performance.
- The proposed Graduate Fellow verbally agrees to the TOAs outlined in Appendix A which is captured in the proposal.
- At least one undergraduate student is actively integrated into the research process, including a plan to provide opportunities to perform research at the collaborating laboratory.
- A comprehensive Mentoring Plan, for the Graduate Fellow and undergraduate student(s), which addresses at least the following in a clear and complete manner: roles and responsibilities, implementation, and periodic evaluation.
- The research activity will promote teaching, training, and learning to support the fostering of the next generation of scientists.

Criteria III: Collaboration Component and Management Plan

The following elements will be considered upon evaluation:

- An effective Management Plan which outlines project administration, coordination, and administrative processes.
- A direct, formalized agreement has been established between the University and a collaborating national or defense laboratory.
- The proposed activity will broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.).

Review and Selection Process

Application Receipt: All completed applications submitted through grants.gov in response to this NOFO will be subjected to a technical evaluation by a panel review. This NOFO contains four TMAs. Applications that are determined non-compliant to these TMAs will not be considered for technical evaluation. Additionally, applications that do not identify a graduate student for participation or a national or defense laboratory collaborator will not be considered.

Application Handling: Completed applications will be handled following DHS safeguarding procedures. All application materials will be treated as confidential.

Panel Review and Reviewers: Each application will be reviewed by at least three (3) panelists. Each panelist is a subject-matter expert (SME) in nuclear forensics. The panelists will be selected by the Program Office, which will also facilitate the review.

Selection Process

Evaluation: Reviewers will conduct their individual evaluation for each assigned application. Following the individual evaluation, a consensus review will be held to formulate a recommendation for each application. The rating of recommendations for each application will follow:

Recommended (R) – Proposals have met and/or exceed the topic requirements/objectives and will conduct successful research. Proposals under this rating are recommended for funding.

Selectable (S) – Proposals will likely satisfy the topic requirements/objectives and has a likelihood of successful research. Proposals under this rating are recommended for funding, if available.

Not Recommended (NR) – Proposals that are non-responsive to the topic area requirements/objectives and/or do not satisfy the evaluation criteria and will unlikely conduct a successful research. Proposals under this rating are not recommended for funding.

A summary of the recommendation and accompanying narrative will be completed by each reviewer. The Program Office will make the selection based on the consensus evaluation. Please note that decisions to fund all the recommended proposals are subjected to available funding.

When the anticipated Federal award amount will be greater than the simplified acquisition threshold, currently \$150,000 (see 2 CFR §200.88), the following applies:

- “ i. Prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold, DHS is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently FAPIIS).
- ii. An applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM.
- iii. DHS will consider any comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant’s integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR §200.205 Federal awarding agency review of risk posed by applicants.”

F. Federal Award Administration Information

Notice of Award

Successful applicants can expect to receive a grant executed by a DHS Grant Officer authorized to obligate DHS funding. Award notices will be sent via email.

Notice of Not Selection for Award

Applications that were not selected for award will be notified by a Grants Officer via e-mail in the Grants and Financial Assistance Division in a timely manner. The Applicant will also receive feedback comments from the consensus reviews. The feedback comments will not include the identities of the panelists and reviewers.

Administrative and National Policy Requirements

All successful applicants for all DHS grant and cooperative agreements are required to comply with DHS Standard Administrative Terms and Conditions, which are available online at:

[DHS Standard Terms and Conditions](#)

The applicable DHS Standard Administrative Terms and Conditions will be for the last year specified at that URL, unless the application is to continue an award first awarded in an earlier year. In that event, the terms and conditions that apply will be those in effect for the year in which the award was originally made.

Before accepting the award the AOR should carefully read the award package for instructions on administering the grant award and the terms and conditions associated with responsibilities under Federal Awards. Recipients must accept all conditions in this NOFO as well as any Special Terms and Conditions in the Notice of Award to receive an award under this program.

Reporting

Federal Financial Reporting Requirements. The Federal Financial Reporting Form (FFR) is available online at:

[SF-425 OMB #4040-0014](#)

- A. Quarterly Federal Financial Reports (Cash Transaction)** – The Recipient shall submit the FFR (SF 425) Federal Cash Transaction Report to the Department of Health and Human Services, Payment Management System, Smartlink. Quarterly Cash Transaction reports shall be submitted no later than 1/30, 4/30, 7/30 and 10/30.
- B. Annual Federal Financial Report** – The Recipient shall submit an annual Federal Financial Report (SF 425) to the DHS Grants Officer no later than 90 days after the Budget Period end date. The report must be submitted via email to DHS-GrantReports@dhs.gov and NTNFCMonthlyReports@hq.dhs.gov. Be sure to include the grant program name and number in the subject line.
- C. Final Federal Financial Report** – The Recipient shall submit the final Federal Financial Report (SF425) to the DHS Grants Officer no later than 90 days after the end of the Project Period end date. The report must be submitted via email to [DHS-](#)

GrantReports@dhs.gov and NTNFCMonthlyReports@hq.dhs.gov. Be sure to include the grant program name and number in the subject line.

Program Performance Reporting Requirements.

For the purpose of program evaluation, all students receiving support under this grant agree to share personal information with the Program Office, which would allow for tracking of progress toward a career within the nuclear forensics workforce.

A. Quarterly Performance Report: A quarterly performance report shall be submitted via email to DHS-GrantReports@dhs.gov and NTNFCMonthlyReports@hq.dhs.gov at the end of every 3 months beginning at the period of performance start date. Be sure to include the grant program name and number in the subject line. The Quarterly Report shall consist of the following and should align with the proposal submitted including any changes made upon award or thereafter:

1. A summary of research conducted, to include quantifiable outcomes and any set-backs;
2. Expected research objectives/goals in the next quarter;
3. Any requests for funding and research deviations from the original proposal and a comprehensive explanation as to the reason for the request;
4. Efforts undertaken with regard to the Mentoring Plan;
5. Graduate Fellow academic and research progress;
6. Undergraduate Student academic and research progress;
7. Summary of student practical research at the collaborating national or defense laboratory (if applicable);
8. Travel and conference attendance within the last quarter and upcoming travel/conference attendance;
9. Copies of any formal presentations or articles as a result of the research; and
10. A summary of activities with regard to engagement of underrepresented groups, if applicable.

B. Annual Project Summary and Accomplishments: In addition to the required quarterly performance report, an Annual Report is due within 30 days of the end of the period of performance. It should contain an updated project quad chart and summary of fiscal year accomplishments must be submitted to the Program Office for every year of the project's duration. The Annual Report shall consist of the following and should align with the proposal submitted including any changes made upon award or thereafter:

1. A summary of research conducted including accomplishments and set-backs, as well as research objectives for the next year. The collaborating laboratory should participate in the development of the Annual Report.
 - i. Discussion should also incorporate the research's impact on the nuclear forensics technical community as it helps to increase the

- speed, accuracy, or precision of nuclear forensics analysis in relation to the Technical Mission Area (Section A); and
 - ii. Assessment of the research and program work against the established milestones and entrance/exit criteria.
2. The Annual Report should all summarize all mentoring activities of the Graduate Fellow and undergraduate student and coordination activities between the faculty PI and laboratory PI.
 3. A summary of the Graduate Fellow and undergraduate student's progress should be developed and should include the following information, if applicable:
 - i. A summary of academic progress, to include a transcript, accomplishments, and contributions to the research;
 - ii. A list of relevant conferences, seminars and/or lectures attended;
 - iii. A list of all publications, presentations, and abstracts that have come out of the research;
 - iv. Details of practical research including dates and feedback on experience;
 - v. Information on issues or barriers that may be impeding student success and steps taken to improve student success;
 - vi. Degree received and date, if applicable;
 - vii. Resume (upon completion of program); and
 - viii. Post-graduation activity and employment (upon completion of the program).
 4. A summary of activities regarding underrepresented students or MSI/HBCU university engagement and coordination activities, if appropriate.

C. Final (End of Program) Performance Report Final Federal Financial Report –

The Recipient shall submit the final Federal Financial Report (SF425) to the DHS Grants Officer no later than 90 days after the end of the Project Period end date. The report must be submitted via email to DHS-GrantReports@dhs.gov and NTNFCMonthlyReports@hq.dhs.gov. Be sure to include the grant program name and number in the subject line.

Close Out Reporting Requirements.

Within 90 days after the end of the period of performance, or after an amendment has been issued to close out a grant, whichever comes first, recipients must submit a final FFR and final progress report detailing all accomplishments and a qualitative summary of the impact of those accomplishments throughout the period of performance.

If applicable, an inventory of all construction projects that used funds from this program must be reported with the final progress report.

After these reports have been reviewed and approved by the Program Office, a close-out notice will be completed to close out the grant. The notice will indicate the period of performance as closed, list any remaining funds that will be de-obligated, and address the requirement of maintaining the grant records for three years from the date of the final FFR.

The recipient is responsible for returning any funds that have been drawn down but remain as unliquidated on recipient financial records.

G. DHS Awarding Agency Contact Information

The Program Officer shall be the DHS official responsible for monitoring the completion of work and technical performance of the projects or activities described in the Program Narrative Statement:

Amalie Zeitoun

DHS Domestic Nuclear Detection Office, Mail Stop 0552

245 Murray Lane SW

Washington, DC 20528-0550

Office: (202) 254-7580

Email: Amalie.Zeitoun@hq.dhs.gov

The Grants Officer shall be the DHS official that has the full authority to negotiate, administer and execute all terms and conditions of this Award in concurrence with the Program Officer.

Shareef Prater

Office of Procurement Operations (MGMT I OPO)

245 Murray Lane SW, Mail Stop 0115

Washington, D.C. 20528-0115

Office: 202.447.5903

Email: Shareef.Prater@hq.dhs.gov

H. Additional Information

Extensions

Extensions to projects awarded under this NOFO are allowed. Note: Extensions are only allowed during the last year of the award. Please follow the instructions below to apply for an extension.

- Extensions to the Period of Performance can only be authorized in writing by the DHS Grants Officer.
- The extension request shall be submitted to the DHS Grants Officer sixty (60) days prior to the expiration date of the performance period.
- Requests for time extensions to the Period of Performance will be considered, but will not be granted automatically, and must be supported by adequate justification to be processed. The justification is a written explanation of the reason or reasons for the delay; an outline of remaining resources/funds available to support the

extended period of performance; and a description of performance measures necessary to complete the project. Without performance and financial status reports current and justification submitted, extension requests shall not be processed.

- DHS has no obligation to provide additional resources/funding as a result of an extension.

Disclosure

Risk Assessment Evaluation

DHS staff will evaluate the risks to the program posed by each applicant, including conducting due diligence to ensure an applicant's ability to manage federal funds. This evaluation is in addition to the evaluation of the applicant's eligibility and the quality of its application on the basis of the Selection Criteria, and results from this evaluation may assist funding decisions. If an award is made, DHS may apply special conditions that correspond to the degree of risk of the award.

In evaluating risks, DHS may consider the following:

- Financial stability;
- Quality of management systems and ability to meet the management standards prescribed in applicable OMB Guidance;
- Applicant's record in managing previous DHS awards, cooperative agreements, or procurement awards, including:
 1. Timeliness of compliance with applicable reporting requirements
 2. Accuracy of data reported
 3. Conformance to the terms and conditions of previous federal awards
 4. If applicable, the extent to which any previously awarded amounts will be expended prior to future awards
 5. Information available through OMB-designated repositories of government-wide eligibility qualification or financial integrity information, such as: Federal Awardee Performance and Integrity Information System (FAPIIS), Duns and SAM
 6. Reports and findings from single audits performed under Subpart F – Audit Requirements, 2 C.F.R. Part 200 and findings and reports of any other available audits
 7. Applicant organization's annual report
 8. Publicly available information, including information from the applicant organization's website
 9. Applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on award recipients.

In addition, organizations who have not received prior DHS Grants and Financial Assistance Division (GFAD) awards may be required to complete a risk assessment questionnaire as part of the pre-award financial and administrative review.

Applicant Disclosure of High Risk Status

Applicants are to disclose if they are currently designated as high risk by a federal awarding agency. This includes, but is not limited to, any status requiring additional oversight by a federal awarding agency due to past programmatic, administrative or financial concerns. If an applicant is designated as high risk by a federal awarding agency, it should provide an explanation with the application package and include the following information:

- The federal awarding agency that assigned the high risk status;
- The federal awarding agency's point of contact for the risk status, including name, phone number and email address;
- Date of the risk status designation;
- Reason(s) for the risk status.

DHS seeks this information to ensure appropriate federal oversight of all grant awards. The disclosure of an organization's risk status does not disqualify it from receiving an award; however additional grant oversight may be required. If necessary, this information will be provided in the award documentation. Failure to disclose high risk status may result in award termination or other remedies.

Other Automatic Carry-forward/Carry-over

Budget periods are funded annually. Any unobligated funds remaining at the end of a budget period will automatically transfer to the next budget period, a process commonly known as carry-forward or carry-over, subsequent budget period amounts may be reduced in proportion to the carry-forward/carryover amounts. DHS may request estimated Federal Financial Reports (FFRs) be submitted prior to the budget period end date to determine potential unobligated amounts. **Large unobligated amounts may result in restriction of automatic carryover authority.**

APPENDIX A - TERMS OF APPOINTMENT

NUCLEAR FORENSICS RESEARCH AWARD – GRADUATE FELLOWSHIP

The purpose of the Nuclear Forensics Research Award (NFRA) Graduate Fellowship is to recruit and develop the next generation of uniquely qualified scientists and engineers required to execute the U.S. Government's (USG) National Technical Nuclear Forensics (NTNF) mission.

PERIOD OF APPOINTMENT

The appointment period is defined in the Appointment Letter, of which these Terms are a part, and may be extended by the U.S. Department of Homeland Security for specific time increments, not to exceed a total of 60 months. All appointments are subject to the continuing availability of appropriated funds. In the event that appropriated funding is not available, the fellow will be notified as soon as possible regarding the procedures for ending the appointment.

REQUIREMENTS FOR MAINTAINING APPOINTMENT

Maintain a minimum 3.3 out of 4.0 GPA for the duration of the appointment.

Attend and present technical findings at the periodic Collaboration Meeting or other DNDO-sponsored meetings, as necessary and/or requested.

Spend nine weeks per year performing hands-on research at a national or defense laboratory in support of the award goals. This time commitment does not have to be fulfilled consecutively.

Be eligible to receive and maintain a DOE Q clearance.

DUPLICATION OF BENEFITS

The fellow may not receive additional compensation for services rendered during the appointment period, unless approved by the Program Office. The fellow, however, may accept awards, prizes, and other payments that do not require a service. Veterans Administration benefits are excluded from this restriction.

ACCESS AUTHORIZATION (SECURITY CLEARANCE)

Upon acceptance of the appointment, the fellow may be required to complete applications for a security clearance. This clearance may be required for the fellow to perform research at the collaborative national or defense laboratory. If a clearance is not granted, the graduate fellow will be allowed to complete the current year's appointment and no reimbursement of the stipend, tuition, and fees will be required. No renewal appointments, however, will be granted to a fellow who is not able to obtain a security clearance when it was requested. The University will be required to replace the graduate fellow as a condition of maintaining the NFRA.

Security clearances will be processed by the appropriate personnel security office of the laboratory which is actively collaborating under the auspices of the NFRA.

OBLIGATIONS

Terms of Appointment, Nuclear Forensics Research Award, Graduate Fellowship

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Date _____

NFRA Graduate Fellowship appointments are part of the National Nuclear Forensics Expertise Development Program, authorized in the *Nuclear Forensics and Attribution Act* (P.L. 111-140) and codified 6 U.S.C. §592. The Fellow must agree to specific terms of appointment in accordance with this law. Specifically, the fellow must complete his/her academic programs with a consistently high level of academic standing; spend nine weeks per year performing hands-on research at the collaborating national or defense laboratory (this time commitment does not have to be fulfilled consecutively); and upon graduation, serve for two years in a postdoctoral or other staff position at a Department of Energy national laboratory, a Department of Defense laboratory, or a federal agency in a technical nuclear forensics-related specialty. The Program Office will work closely with the fellow throughout the award to foster strong professional connections, which will be further strengthened through the University-National Laboratory collaboration process.

Should a fellow choose not to comply with these terms of appointment, the total amount of the tuition and stipend must be repaid to the U.S. Government including interest at the prevailing rate current for graduate student loans at the time the fellowship was awarded.

During the appointment, each fellow is a member of the professional community of the facility to which he or she is assigned and is subject to the rules, privileges, and responsibilities of that community. Failure to adhere to facility requirements will, at the determination of the Program Office, be basis for revocation of the fellowship and cessation of any further payments.

REPORTS AND PUBLICATIONS

The Program Office requires that thesis research performed by the graduate fellow is aligned with the NFRA research project and that the security and sensitivity of the work is protected.

Reports, presentations, and publications (including final dissertations) containing research supported through the NFRA must be submitted to the collaborating laboratory for technical and classification review prior to being sent to the Program Office for approval and before being made available to the public. The graduate student should follow laboratory-specific review processes and allow at least two weeks (at least four weeks for dissertations) for Program Office approval.

Normally, the laboratory advisor will serve on the fellow's graduate committee. If not, when the fellow distributes his/her final draft of the undefended thesis to the graduate committee, he/she must also provide a copy to the laboratory advisor, allowing at least two weeks for review and comment.

PUBLICATION ACKNOWLEDGMENT

The Program Office encourages the publication of reports and articles in scientific and engineering journals. The fellow must submit any articles, reports, or theses, which have been approved as described above, prior to submission for publication. All publications must show the joint affiliation of the fellow with the university and with the laboratory at which the research was conducted. Support from the NFRA should also be acknowledged in the following manner:

'This material is based upon work supported by the U.S. Department of Homeland Security under Grant Award Number, DHS-17-DN-130-NFRA-001.'

In addition, the following disclaimer should be added to all publications and presentations:

'The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressed or implied, of the U.S. Department of Homeland Security.'

DISCLAIMER OF LIABILITY

The Department of Homeland Security, the collaborating laboratory facility, its sponsoring agency, and/or persons acting on the behalf of the facility are not responsible for:

1. Any alleged or actual liability, cost, or expense incurred as a result of personal injury to or death of persons including the fellow, or damage to or destruction of property, or for any other loss, damage, or injury of any kind whatsoever, except where such death, injury, loss, or damage is the result of willful negligence or intentional misconduct of an officer, agent, or employee of DHS, the collaborating facility, or the facility's sponsoring agency or contractor.
2. Any claims, losses, expenses (except as otherwise provided in these Terms of Appointment) or damages, including but not limited to bodily injury, death, or property damage, caused by the negligence or misconduct of the fellow.
3. Any claims, losses, expenses, or damages, including, but not limited to, bodily injury, death, or property damage, arising out of, or resulting in any way from, the use or misuse of information acquired by the fellow during the appointment under these Terms of Appointment.
4. Neither the Department of Homeland Security, the collaborating laboratory facility, its sponsoring agency, and/or persons acting on the behalf of the facility, make any warranty, expressed or implied, **(I)** with respect to the accuracy, completeness, or usefulness of any information acquired by the fellow under these Terms of Appointment, **(II)** that the use of any such information may not infringe upon privately owned rights, **(III)** that the information acquired by the fellow under these Terms of Appointment will not result in injury or damage when used for any purpose, or **(IV)** that information acquired by the fellow under these Terms of Appointment will accomplish any particular results or is safe for any purpose, including the intended purpose.

FELLOW DATA AGREEMENT

In consideration of performing research at the collaborative facilities, the Fellow hereby agrees as follows:

1. The Fellow shall provide the collaborative facility, in written form, any and all technical data produced or generated during the course of the appointment in whatever form it may be recorded. If not recorded or written, the fellow shall (upon request) provide the collaborative facility a written report of any technical data generated by the fellow during the course of the appointment. "Technical data" includes recorded information, regardless of form or characteristic, of a scientific or technical nature. It may be, for example, documented, experimental, or developmental research; demonstration or engineering work usable or to be used to design a process or to procure or produce materials; or support to maintain or operate a facility. The data may be graphic or pictorial delineations in media such as drawings or photographs, text in specifications or related performance or design-type documents, or computer software (including computer programs, computer software databases, and computer software documentation). Examples of technical data include research and engineering data, engineering drawings and associated lists, specification, standards, process sheets, manuals, technical

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reports, catalog item identification and related information. Technical data as used herein does not include financial reports, cost analyses, or other information incidental to contract administration.

2. The collaborative facility and/or the Government of the United States shall have the right to use, duplicate, or disclose the fellow's technical data, in whole or in part, in any manner and for any purpose whatsoever and reserve the right to permit others to do so as well.

3. The fellow understands and agrees to respect any and all access limitations to any classified information, military sensitive unclassified information, proprietary information (including but not limited to proprietary data, trade secrets, or other information which is restrictively marked or designated), or any other technical data, commercial, or financial information which is privileged or confidential during or as a result of such appointment as may be established by the collaborative facility. In the event that the fellow should receive or in any way obtain access to any such information in connection with this appointment, whether by authorization, inadvertently, or otherwise, the fellow further understands that unauthorized disclosure of or failure to safeguard such information may subject the fellow to civil and/or criminal liability under applicable laws of the United States.

4. In recognition of the statutory intent set forth in title 35 United States Code Section 212, the Fellow acknowledges that this appointment is considered to be in the nature of a scholarship, fellowship, training grant, or other funding agreement made on behalf of a Federal agency primarily to an awardee for educational purposes, and therefore, no provision shall be contained herein, nor shall any section be construed as permitting or authorizing the Federal agency to assert any rights to inventions made by the awardee.

ACCEPTANCE OF TERMS OF APPOINTMENT

I have carefully read the above Terms of Appointment and I understand that this appointment is granted subject to said Terms. By accepting the appointment, I am bound by the Terms of Appointment, the Appointment Letter, and the general program guidance.

Certificate of Acknowledgment

State of _____ County of _____

On _____ before me, _____
Date Notary's Name

Signer (Fellow) – Printed Name

Signer (Fellow) – Signature

has satisfactorily identified himself/herself as the signer to the above NFRA Graduate Fellowship Terms of Appointment.

Affix Notary Stamp Here

Commission Expiration Date

Notary's Name

Notary's Signature

Initials _____

Date _____