

DEPARTMENT OF ENERGY (DOE)

OFFICE OF NUCLEAR ENERGY (NE)

Idaho Operations Office



FUNDING OPPORTUNITY ANNOUNCEMENT

**DOE TRAINEESHIP IN NUCLEAR
RADIOCHEMISTRY**

**Funding Opportunity Announcement (FOA) Number:
DE-FOA-0001369**

Announcement Type: Initial

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Deadline for Questions	February 29, 2016, 8:00 PM ET
Submission Deadline for Full Applications:	March 28, 2016, 8:00 PM ET
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Section I - FUNDING OPPORTUNITY DESCRIPTION

A. Description

The purpose of this Funding Opportunity Announcement (FOA) is to seek applications from accredited U.S. College and University (hereafter referred to as “Institute of Higher Education (IHE)”) for a Traineeship Program to enhance the training of graduate students in specific disciplines or sub-disciplines aligned with U.S. Department of Energy (DOE) science, technology, engineering and mathematics (STEM) workforce needs in the area of radiochemistry. This DOE Traineeship program will support innovative proposals for graduate level training that leverage DOE assets and capabilities and strategic partnerships, and address emerging needs in graduate training to enable preparedness for STEM careers beyond those in academia.

DOE has mission-specific workforce needs in STEM fields and a responsibility to support the training of the next generation of STEM professionals who will serve that mission. The complex nature of the scientific and technical work supported by DOE and carried out by the DOE laboratories, IHE, and the private sector generally requires advanced graduate level training. Historically, the Department’s primary mechanism for supporting the training of graduate students has been through the inclusion in standard research awards to IHE and DOE laboratories. This FOA will establish DOE-sponsored IHE-led traineeships as a mechanism for graduate-level training critical to DOE mission-driven workforce needs. This will be accomplished through a focused academic graduate program that delivers unique, innovative curriculum, coupled with a rigorous thesis or dissertation research requirement, in the desired DOE-relevant scientific or technical discipline(s). The DOE-sponsored IHE-led traineeships will strategically address identified STEM workforce training needs in the area of radiochemistry.

Each traineeship is expected to run from 1 to 2 years. For example, the first class of trainees will complete the traineeship two years into the award period of performance. The second class of trainees will complete the traineeship in the third year of the award’s period of performance, and so on until the fourth class of trainees will complete the traineeship at the end of the award’s fifth year of performance.

DOE’s Offices of Nuclear Energy (DOE-NE) and Environmental Management (DOE-EM) shall provide funding for the cooperative agreement(s) resulting from this FOA and shall work with the recipient IHE to ensure the goals and objectives discussed below are implemented.

The DOE-NE mission is to lead the DOE investment in the development and exploration of advanced nuclear science and technology. DOE-NE promotes nuclear energy as a resource capable of meeting the Nation’s energy, environmental, and national security needs by resolving scientific, technical, and regulatory challenges through research, development, and demonstration.

The DOE-EM mission is to complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research.

The performance objectives of DOE's Traineeship in Nuclear Radiochemistry are to support the training of the next generation of STEM professionals at IHEs as follows:

- Advance the DOE mission by advancing specific STEM workforce competencies required for the DOE's unique mission to ensure America's security and prosperity by addressing its science, energy, environmental, and nuclear challenges;
- Address priority DOE STEM workforce needs and identified gaps by advancing those critical STEM disciplines and competencies specifically relevant to the Department of Energy's mission where other development programs do not exist or where DOE-relevant applications are not being leveraged to support specific DOE mission responsibilities.

DOE's Traineeships are guided by the following key principles:

1. DOE Traineeship programs will be IHE-led, targeted training opportunities.
2. DOE Traineeships will not duplicate the efforts of other Federal agencies and will leverage DOE assets and capabilities where beneficial and practicable.
3. STEM training areas to be addressed in DOE Traineeships are derived from an evidence-based assessment of the DOE workforce needs.
4. Cooperative agreements resulting from this FOA will be established following best practices for open, competitive solicitation processes, using established merit review criteria specified in the FOA.
5. The DOE and the IHE(s) will develop evaluation plans for Traineeship programs that will include clear program goals and mechanisms for tracking program outcomes and evaluating program success.

Providing training to students in radiochemistry will:

- Support the ongoing need for personnel who can develop and maintain the nation's nuclear power technology;
- Enhance a IHE's ability to conduct research and development; and
- Fulfill national demand for highly trained scientists and engineers to work in nuclear science and engineering (NS&E) areas in which DOE has ongoing needs.

Traineeship awards made under this FOA are for IHEs that support the specialized training of graduate students (Masters and Ph.D. students) in Radiochemistry. This specialized training includes training beyond traditional research and laboratory skills. The awards will offset the cost of stipends, tuition and fees, and training related expenses for appointed

trainees. The awards will not typically pay for institutional personnel salaries, but very limited faculty salary support may be allowed in some instances; traineeship awards may provide limited support for staff time for new curriculum development. The awarded IHE is responsible for

1. Establishing an application/selection process for student trainee candidates.
2. Implementing the training program as described in this FOA and the awarded application.
3. Implementing measures to evaluate the effectiveness of the training program.

A traineeship award to a IHE is anticipated to cover a period of five years. DOE may conduct an external progress review at each year end to inform the decision to continue the award. At DOE's option, the award may be renewed or re-competed at the end of the award term to help to develop an enduring institutional capacity for graduate training in the STEM area(s) important to DOE.

Overall, this DOE Traineeship program shall support:

- One or more five-year proposals from IHEs proposing to train graduate students in specific disciplines or sub-disciplines aligned with DOE STEM workforce needs; for this FOA this is specifically in the area of Radiochemistry.
- Two years of a graduate student's Ph.D. level training; the traineeship can also support graduate students pursuing a terminal Master's degree if the Master's degree requires a thesis project. Traineeship programs at a given academic institution should be relatively small and focused, supporting between 5-6 new students per year, with a total of up to 24 students per 5 year award.
- An overall IHE-led graduate training program that includes a combination of targeted, relevant and innovative STEM course work, mentored graduate research, and other required activities in Radiochemistry. Such activities designed to address essential knowledge and skills and to leverage DOE capabilities and assets, could include focused workshops; seminars; research practicums at a DOE laboratory or other DOE-supported assets; internships with strategic partners; or participation in external courses and programs.
- A graduate training program that includes structured support for graduate student professional development in non-research skills, including but not limited to project management, oral and written science communication, developing and working within large collaborations (team science), and entrepreneurial skills.
- Provides mentors to the students who are qualified researchers or related subject matter experts with a strong record of performance, including a record of publications and a favorable record in training and mentoring students at the graduate level.

Eligibility requirements for graduate student trainees are limited to:

- U.S. Citizens

- Be enrolled full-time in qualified graduate program at the Principal Investigator's academic institution and either pursuing a Ph.D. or a Master's degree as their degree objective
- Conduct graduate study and research aligned with the Radiochemistry discipline defined in this FOA
- Be able to meet the traineeship program requirements specified by the applicant in the application

NOTE: The term "applicant" as used in this FOA means IHEs that submit an application to DOE in response to this FOA; it does not refer to students who apply for traineeships under the DOE Traineeship in Radiochemistry Program.

Also, the term "application" as used in this FOA refers to the application provided in response to the FOA made by IHE; it does not refer to individual traineeship applications by students to apply for funds.

Section II - AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

Cooperative Agreements

DOE anticipates awarding cooperative agreements under this funding opportunity announcement (See Section VI.B.2 Statement of Substantial Involvement).

B. ESTIMATED FUNDING

Amount New Awards

Approximately \$3 million is expected to be available to fund up to a five year traineeship program beginning in FY 2016.

C. MAXIMUM AND MINIMUM AWARD SIZE

Ceiling (i.e., the maximum amount for an individual award made under this announcement): \$3.0 million (no more than \$1 million per year and maximum of \$55,000 per student per year)

The \$55,000 per student per year assumes 12-month student participation, a \$30,000 to \$35,000 stipend per year, and no more than \$2,000 to \$3,000 for traineeship-related travel. The remaining funds may be used to cover associated costs to carry out the scope of the training program, including partnership costs, limited equipment, program evaluation efforts, and/or supplemental support for tuition and fees for the student.

Floor (i.e., the minimum amount for an individual award made under this announcement):
\$ None

D. EXPECTED NUMBER OF AWARDS**Number of Awards**

DOE plans one award from this FOA. However, DOE may elect to award more than a single award given workforce development training needs, availability of funds, and quality of applications received. Only one cooperative agreement award per IHE is allowed.

E. ANTICIPATED AWARD SIZE**Award Range**

The overall funding per cooperative agreement is anticipated to be no more than \$3.0 million (see Paragraph C).

F. PERIOD OF PERFORMANCE**Number of Years**

DOE anticipates making awards with a period of performance up to five years. DOE retains the option to renew the award or re-solicit the opportunity at the end of the period of performance.

G. TYPE OF APPLICATION**New Applications Only**

DOE will accept only new applications under this announcement.

Section III - ELIGIBILITY INFORMATION**A. ELIGIBLE APPLICANTS****Restricted Eligibility (December 2014)**

In accordance with 2 CFR 910.126(b), eligibility for award is restricted to IHEs with graduate programs of study in science, technology, and engineering and math disciplines related to the nuclear energy fields in Radiochemistry. This includes IHEs with graduate programs of study in science, technology, engineering math and radiochemistry disciplines related to nuclear energy, such as Nuclear Engineering, Mechanical Engineering, Electrical Engineering, Health Physics, Nuclear Materials Science, Applied Nuclear

Physics, Nuclear Policy, Radiation Protection Technology, Nuclear Power Technology, Nuclear Maintenance Technology, and Nuclear Engineering Technology, etc. Minority institutions such as Historically Black Colleges and IHE and/or minority serving institutions with these types of graduate study programs are encouraged to apply. IHEs with cooperative programs which share coursework between two or more IHEs to meet the above requirements are also encouraged to apply.

B. COST SHARING

Cost sharing is not required. Because this FOA is for training, the Energy Policy Act of 2005 requirements for cost sharing from the Awardee are not applicable, even though the traineeship may include ancillary research and development activities. However, applicant IHEs may propose cost sharing.

C. Traineeship Partners.

The FOA requires DOE Traineeships programs to partner with at least one of the following DOE-focused program elements below (for additional details, see FOA Section IV.C):

1. A DOE National Laboratory
2. A private sector for-profit or non-profit organization currently sponsored by DOE
3. A non-DOE-sponsored public or private sector organization to address a specific DOE workforce training need at FFRDC/National Laboratories

Partnership with a DOE National Laboratory.

The following applies if the IHE is partnering with a DOE National Laboratory:

Federally Funded Research and Development Center (FFRDC) Contractors. FFRDC contractors may be proposed as a partner or team member (not a prime awardee) on the IHE's application subject to the following guidelines:

- Authorization for non-DOE/NNSA FFRDCs. The Federal agency sponsoring the FFRDC contractor must authorize in writing the use of the FFRDC contractor on the proposed project and this authorization must be submitted with the application. The use of a FFRDC contractor must be consistent with the contractor's authority under its award and must not place the FFRDC contractor in direct competition with the private sector.
- Authorization for DOE/NNSA FFRDCs. The cognizant contracting officer for the FFRDC must authorize in writing the use of a DOE/NNSA FFRDC contractor on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization.

"Authorization is granted for the [Name] Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complimentary

to the missions of the laboratory, will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector."

- **Value/Funding.** The value of, and funding for, the FFRDC contractor portion of the work will not normally be included in the award to a successful applicant. Usually, DOE will fund a DOE FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency. The cost of the FFRDC is included in the total cost of the award.
- **Cost Share:** Cost sharing is not required for this award. However, if the applicant proposes cost sharing, the applicant's cost share requirement will be based on the total cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.
- **FFRDC Contractor Effort:** The scope of work to be performed by the FFRDC contractor may not be more significant than the scope of work to be performed by the applicant.
- **Responsibility:** The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the FFRDC contractor.

Partnership with a private sector for-profit or non-profit organization currently sponsored by DOE.

The following applies if the IHE is partnering with a private sector for-profit or non-profit organization currently sponsored by DOE (DOE sponsored organization):

Private sector for-profit or non-profit organization currently sponsored by DOE (DOE sponsored organization). DOE sponsored organizations may be proposed as a partner or team member (not a prime awardee) on the IHE's application subject to the following guidelines:

- **Authorization for DOE sponsored organizations.** The DOE office sponsoring the DOE sponsored organization must authorize in writing the use of the DOE sponsored organization on the proposed project and this authorization must be submitted with the application. The use of a DOE sponsored organization must be consistent with the organization's authority/sponsorship under its award. The cognizant DOE contracting officer for the DOE sponsored organization must authorize in writing the use of a DOE sponsored organization on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization.

"Authorization is granted for the [Name] DOE sponsored organization to participate in the proposed project. The work proposed for the DOE sponsored

organization is consistent with or complimentary to the missions of the DOE sponsored organization and will not adversely impact execution of the DOE/NNSA assigned programs at the DOE sponsored organization."

- DOE sponsored organization effort: The scope of work to be performed by the DOE sponsored organization may not be more significant than the scope of work to be performed by the applicant.
- Responsibility. The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the DOE sponsored organization.

Partnership with a non-DOE-sponsored public or private sector organization to address a specific DOE workforce training need at FFRDC/National Laboratories.

The following applies if the IHE is partnering with a non-DOE-sponsored public or private sector organization:

Non-DOE-sponsored public or private sector organization (non-DOE-sponsored organization). Non-DOE-sponsored organizations may be proposed as a partner or team member (not a prime awardee) on the IHE's application subject to the following guidelines:

- Authorization for non-DOE-sponsored organizations. An official of the non-DOE-sponsored organization with the authority to legally bind the non-DOE-sponsored organization must authorize in writing the use of the non-DOE-sponsored organization on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization.

"Authorization is granted for the [Name], a non-DOE-sponsored organization, to participate in the proposed project. In consideration of this participation, the non-DOE-sponsored organization hereby releases the Government from any and all liability under this agreement for further equitable adjustments attributable to such facts or circumstances giving rise to the DOE-sponsored Traineeship in Nuclear STEM Radiochemistry."

- Non-DOE-sponsored organization Effort: The scope of work to be performed by the non-DOE-sponsored organization may not be more significant than the scope of work to be performed by the applicant.
- Responsibility. The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the non-DOE-sponsored organization.

Section IV - APPLICATION AND SUBMISSION INFORMATION

A. ADDRESS TO REQUEST APPLICATION PACKAGE

Apply at Grants.gov

Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “APPLICANT”, then Click “Apply for Grants,” and then select “Download a Grant Application Package.” Enter the CFDA and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package.

B. LETTER OF INTENT AND PRE-APPLICATION

1. Letter of Intent.

Applicants should to submit a letter of intent by 8:00 PM Eastern Time on February 15th, 2016, however it is not required. If submitted, this letter should include the name of the applicant, the title of the project as “DOE Radiochemistry Traineeship”, the name of the Project Director/Principal Investigator(s), the amount of funds requested, proposed partners, and a one-page abstract. Letters of intent will be used by DOE to organize and expedite the merit review process. Failure to submit such letters will not negatively affect a responsive application submitted in a timely fashion. The letter of intent should be sent by E-mail to DOE Contract Specialist, Shawn Tinsley at tinslesm@id.doe.gov.

2. Pre-application

Pre-applications are not required and will not be accepted.

C. CONTENT AND FORM OF APPLICATION

Applicants must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL- Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.

1. SF 424 - Application for Federal Assistance

Complete this form first to populate data in other forms. Complete all required fields in accordance with the pop-up instructions on the form. The list of certifications and assurances referenced in Field 21 can be found on the DOE Financial Assistance Forms Page at

<http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Certifications and Assurances.

2. Project Narrative File - Mandatory Other Attachment

The program narrative page limitation is as described in each section below. The program narrative, when printed, will fit standard 8.5" by 11" paper with 1" margins (top, bottom, left, and right) single spaced. **EVALUATORS WILL REVIEW ONLY THE NUMBER OF PAGES SPECIFIED.** The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application. See Part VIII.D for instructions on how to mark proprietary application information. Save the information in a single file named "Project.pdf," and click on "Add Mandatory Other Attachment" to attach.

The project narrative must include:

Program Description

The program description should clearly and completely address each of the Merit Review Criteria listed in Section V.2 of this FOA. The page is limited to 20 pages. Pages submitted over the page limit will not be reviewed.

This section should describe the currently established graduate study programs in Science, Technology, Engineering and Math programs, including to specify graduate study programs in Radiochemistry. Provide a brief history of the academic program, discuss the current program and describe the future plans for the program. In the discussion on future plans, provide evidence as to the IHE commitment to the growth and maintenance of the academic program. The Program Description should also include the information required by each of the bullets below. This information is included within the overall 20 page limit for the Program Description.

- Applications are required to include information about the process for student recruitment, planned courses, curricula, seminars, workshops, or tutorials that address the targeted STEM area in Radiochemistry, and how the specific targeted STEM area of Radiochemistry will be incorporated into mentored research experiences.
- The application should describe targeted support for two years of a graduate student's Ph.D. level training in Radiochemistry. The application may also describe targeted support for graduate students pursuing a terminal Master's degree in Radiochemistry if the Master's degree requires a thesis project.
- The application should describe the proposed traineeship program in Radiochemistry at the academic institution. Include a description of the number of new students anticipated to be supported in the first year of the award, as well as each year thereafter.
- The application should describe the overall IHE-led graduate training program, including targeted, relevant and innovative STEM course work, mentored graduate research, and other required activities in Radiochemistry designed to address essential

knowledge and skills and to leverage DOE capabilities and assets. Specify other activities (e.g., focused workshops; seminars; research practicums at a DOE laboratory or other DOE-supported assets; internships with strategic partners; or participation in external courses and programs, etc.) and how they will be accomplished. Describe the graduate training program's structured support for graduate student professional development in non-research skills, including but not limited to project management, oral and written science communication, developing and working within large collaborations (team science), and entrepreneurial skills, etc., and how this will be accomplished.

- The application must clearly describe the planned curriculum for Radiochemistry-related graduate training, and describe any proposed new curriculum development where new courses, workshops, etc. are needed as part of the traineeship program of study. Provide detailed information about the planned curricula, including courses, workshops and seminars, research experiences, and mentoring that will be incorporated into the proposed DOE traineeship program. Describe any limited support for staff time for new curriculum development, if any.
- Specify how the proposed Radiochemistry program will address the DOE workforce training need identified by this FOA.
- Provide an overview of how the IHE will review and assess the quality of the trainee program and the overall impact of the trainee program on the workforce training goal of DOE. Note that as a deliverable under any resultant award, the awardee will be required to develop and deliver for DOE approval a rigorous evaluation plan that explains how the awardee will review and assess the quality of the trainee program and the overall impact of the trainee program on the workforce training goal of the sponsoring DOE Program Office.
- Provide an acknowledgement of the requirements for eligible graduate students, mentors, and academic institutions as outlined in Attachment A to this FOA.
- To help establish DOE Traineeships programs that focus on critical STEM disciplines and competencies specifically relevant to DOE's mission, proposals responsive to the FOA must partner with at least one of the following DOE-focused program elements:
 1. A DOE National Laboratory. IHE may propose to partner with one or more DOE national laboratories to incorporate program elements that enhance the quality of the training program and specifically address Radiochemistry discipline training. The required structured program elements for graduate trainees carried out in partnership with a DOE national laboratory can include:
 - Long-term or short-term research internships at a DOE national laboratory in collaboration with DOE laboratory scientists or engineers;
 - Laboratory practicums that occur at a DOE national laboratory in collaboration with DOE laboratory scientists or engineers;

- Scientific or technical workshops at a DOE laboratory that hosts unique research capabilities or facilities relevant to the target STEM discipline area;
 - Focused long-term or short-term summer credit-bearing courses at a DOE laboratory that offers unique research capabilities or facilities related to the target STEM discipline area; or
 - Workshops related to professional development skills critical to a broader range of career options, including research project management, science communication, technology transfer, or related regulatory requirements.
2. A private sector for-profit or non-profit organization currently sponsored by DOE. IHE may propose to partner with one or more DOE-sponsored private sector organizations. This would help incorporate elements that enhance the quality of the training program and specifically address the DOE STEM discipline training in Radiochemistry. Required, structured program elements for graduate trainees carried in partnership with a private sector organization can include:
- Research internships at the organization;
 - Scientific or technical workshops at a partner organization hosting unique research capabilities or facilities related to the target STEM discipline area;
 - Workshops related to professional development skills critical to a broader range of career options, including research project management, construction project management, entrepreneurial skills, science communication, technology transfer, or related regulatory requirements that can be uniquely provided by the organization.
3. A non-DOE-sponsored public or private sector organization to address a specific DOE workforce training need in Radiochemistry. The IHE may propose unique partnerships with non-DOE sponsored public or private sector organizations to carry out activities that enhance the overall training program to meet Radiochemistry workforce training needs.
- List and provide an explanation for the courses offered under each relevant graduate degree which are most relevant to the graduate program. Please include a table with course title, course number, description, and number of times offered per year;
 - List the facilities, research areas and affiliated program areas and provide a brief description of each facility as to how it is used in the relevant academic program offered (limit two pages);

- List any collaborative or affiliated, if any, relevant academic programs with other IHE (Optional); and
- Metrics on current and recent existing graduate student population involved in the relevant academic graduate programs:
 - Number of students currently enrolled.
 - Number and type of degrees issued over the past five years.
 - Titles of Projects/Research, Theses and Dissertations completed over the past five years.
- Describe your IHE's process for helping students at your school to learn about the traineeship opportunity.
- Describe your IHE's process for distributing traineeship funds to students selected for award as well as tracking usage and reporting, including post-traineeship results reporting.

3. Other Attachments Form

Submit the following files with your application and attach them to the Other Attachments Form. Click on "Add Mandatory Other Attachment" to attach the Project Narrative. Click on "Add Optional Other Attachment," to attach the other files.

Other attachments to the application submission are not included in the 20-page Program Description page limit. These other attachments and forms include the following documents:

Project Summary/Abstract File

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department may make it available to the public if an award is made. The project summary must not exceed one (1) page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) [select single or double spaced] with font no smaller than 11 point. Save this information in a file named "Summary.pdf," and click on "Add Optional Other Attachment" to attach.

Faculty Description

Principal Faculty Members: List the names, title (e.g. Associate, Assistant Professor), research interest areas and percentage of time devoted to the program for each faculty member involved in delivering the relevant academic programs.

Commitment Letters from Third Parties Contributing to Cost Sharing

Cost sharing is not required for this award but may be proposed by the IHE, if desired. If a third party, (i.e., a party other than the IHE submitting the application) proposes to provide all or part of the required cost sharing, the applicant must include a letter from the third party stating that it is committed to providing a specific minimum dollar amount of cost sharing. The letter should also identify the proposed cost sharing (e.g., cash, services, and/or property) to be contributed. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. Save this information in a single file named "CLTP.pdf" and click on "Add Attachments" in Field 12 to attach.

Budget (if applicable) for DOE/NNSA Federally Funded Research and Development Center (FFRDC) Contractor

For any FFRDC contractor that is to perform a portion of the work, applicants must provide a DOE Field Work Proposal in accordance with the requirements in DOE Order 412.1 Work Authorization System. This order and the DOE Field Work Proposal form are available at

<https://www.directives.doe.gov/directives-documents/0412.1-BOrder-A-admchg1>. Use the FFRDC name as the file name (up to 10 letters) and attach to the R&R Other Project Information form in Field 12 - Add Attachments.

SF 424 A Excel, Budget Information - Non-Construction Programs File

Applicants must provide a separate budget for each year of support requested and a cumulative budget for the total project period. Use the SF 424 A Excel, "Budget Information - Non Construction Programs" form on the DOE Financial Assistance Forms Page at

<http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under DOE budget forms.

Applicants may request funds under any of the Object Class Categories as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV, G). Save the information in a single file named "SF424A.xls," and click on "Add Optional Other Attachment" to attach.

Budget Justification File

Applicants must justify the costs proposed in each Object Class Category/Cost Classification category (e.g., identify key persons and personnel categories and the estimated costs for each person or category; provide a list of equipment and cost of each item; identify proposed subaward/consultant work and cost of each subaward/consultant; describe purpose of proposed travel, number of travelers, and number of travel days; list general categories of supplies and amount for each category; and provide any other

information you wish to support your budget). Provide the name of your cognizant/oversight agency, if you have one, and the name and phone number of the individual responsible for negotiating your indirect rates. If cost sharing is proposed, you must have a letter from each third party contributing cost sharing (i.e., a party other than the organization submitting the application) stating that the third party is committed to providing a specific minimum dollar amount of cost sharing. In the budget justification, identify the following information for each third party contributing cost sharing: (1) the name of the organization; (2) the proposed dollar amount to be provided; (3) the amount as a percentage of the total project cost; and (4) the proposed cost sharing - cash, services, or property. By submitting your application, you are providing assurance that you have signed letters of commitment. Successful applicants will be required to submit these signed letters of commitments. Save the budget justification information in a single file named "Budget.pdf," and click on "Add Optional Other Attachment" to attach.

Other Instructions for proposed budgets for DOE Traineeship in Radiochemistry should comply with the award size limitations identified in Section II.C. of this FOA.

Generally, DOE Traineeship awards will not support institutional personnel salaries. However, a limited amount of funding in the overall budget for staff time under circumstances where research or technical staff is developing new training related curriculum, workshops, or courses is allowed. Allowable costs must comply with all Federal cost accounting standards and requirements (2 CFR 220).

Subaward (Total FED + Non-FED) Form

Applicants shall submit budgets for Subrecipients, other than DOE FFRDC Contractors, including partnerships, private sector for-profit or non-profit organizations currently sponsored by DOE, as well as partnerships with non-DOE-sponsored public or private sector organizations to address a specific DOE workforce training need at FFRDC/National Laboratories.

Applicants must provide a separate cumulative budget for each subrecipient that is expected to perform work estimated to be more than \$100,000 or 50 percent of the total work effort (whichever is less). Download the Budget Attachment from the SUBAWARD BUDGET (Total Fed + Non-Fed) FORM and e-mail it to each subrecipient that is required to submit a separate budget. After the Subrecipient has e-mailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subrecipient's name as the file name.

Additionally, a separate budget justification must be submitted for each cumulative subrecipient budget submitted as part of the application. Subrecipients must have approved indirect rates or utilization of the 10% MTD rate as identified in 2 CFR 200.

Project/Performance Site Location(s)

Indicate the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the 2 digit state code followed by a dash and a 3 digit Congressional district code, for example VA-001. Hover over this field for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

SF-LLL Disclosure of Lobbying Activities

If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, applicants must complete and submit Standard Form - LLL, “Disclosure Form to Report Lobbying.”

References and Citations for the Program Description

This is not a mandatory attachment; however, if the applicant elects to provide this information the applicant may submit it as an Other Attachment.

NOTE: Once selection is made, the selectee will be required to complete an Environmental Checklist. Completion/submission of the Environmental Checklist will be required in order to receive the award. A copy of the Environmental Checklist form will be provided by the DOE Contract Specialist.

Summary of Required Forms/Files Table

Your application must include the following documents:

Name of Document	Form	File Name
Application for Federal Assistance – SF424	Form	N/A
Project Narrative File	PDF	Project.pdf
Other Attachments (as applicable)	Form	N/A

D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

If selected for award, DOE reserves the right to request additional or clarifying information for any reason deemed necessary.

E. SUBMISSION DATES AND TIMES

1. Pre-application Due Date

Pre-applications are not required.

2. Application Due Date

Applications are due by 8:00 PM Eastern Time on March 28th, 2016. Applicants are encouraged to transmit your application well before the deadline. **APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.**

Applications Due Date 8:00 PM Eastern Time

F. INTERGOVERNMENTAL REVIEW

Program Not Subject to Executive Order 12372

G. FUNDING RESTRICTIONS

Funding for all awards and future budget periods are contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority.

Cost Principles. Costs must be allowable, allocable and reasonable in accordance with the applicable Federal cost principles referenced in 2 CFR 200 *et seq* as amended by 2 CFR part 910 *et seq* [DOE Financial Assistance Regulation].

Pre-award Costs. Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 2 CFR 200 as amended by 2 CFR part 910 [DOE Financial Assistance Regulation]. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

1. Where to Submit

Application package must be obtained through the “Apply for Grants” function at www.Grants.gov by downloading the application package and its instructions. Save these files to your computer for future reference and use. You do not need Internet access to read the instructions or to complete the application once you save them to your computer. Once your application is completed, submit it through grants.gov.

2. Registration Process

Applicants must be registered with FedConnect in order to submit your application. Guidance on registering can be found at www.FedConnect.net through the link “Have Questions? Need help getting started? Click here.” We recommend applicants register and become familiar with FedConnect at least two weeks before submitting your application.

Section V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the funding opportunity announcement.

2. Merit Review Criteria

The evaluation criteria and weights are provided below. All applications received in response to the DOE Traineeship FOA and pass the initial review shall be subject to a merit-based review.

Evaluation Criteria – Of Equal Weight:

1. Competency of applicant’s personnel and adequacy of proposed resources. This criterion will review the qualifications, experience, and resources of the applicant to accomplish the traineeship program, including competency of IHE graduate faculty personnel and adequacy of proposed resources in the Radiochemistry area of graduate Nuclear STEM training. This will take into consideration, but not limited to staff education, experience and expertise, available graduate Nuclear STEM resources, institutional/organizational commitment to graduate Nuclear STEM education, and (if appropriate) access to technologies.
2. Scientific and/or technical merit or the educational benefits of the proposed project. This criterion will consider the potential of the program to conduct graduate Nuclear STEM education in Radiochemistry as well as alignment of the graduate programs with the NE and EM missions, in particular in the area of Radiochemistry. This includes the scope and depth of the classes, as well as history and future plans of the graduate Nuclear STEM program.
3. Appropriateness of the proposed method or approach. This criterion will consider the appropriateness of the IHE proposed method and approach to accomplish the traineeship program. This includes the likelihood that the program will be

successfully implemented at the applicant IHE, including the acceptability of your school's processes for helping students to learn about the traineeship opportunity, as well as the processes for distributing fellowship/scholarship funds, tracking usage and reporting.

Other Program Policy Selection Factors

The DOE selection official may consider the following program policy factors in the selection process:

- IHE diversity and consideration of IHE underrepresented in the DOE IHE Programs portfolio.

B. REVIEW AND SELECTION PROCESS

1. Merit Review

Applications Subject to Merit Review

Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance." This guide is available at <http://energy.gov/management/office-management/operational-management/financial-assistance> under Financial Assistance Policy and Guidance.

2. Selection

Selection Official Consideration

The DOE Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available in making the selection decision.

3. Discussions and Award

Government Discussions with Applicant (December 2014)

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 2 CFR part 200 as amended by 2 CFR part 910 and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES

Selection and Award Date

DOE anticipates notifying applicants selected for award by the end of May 2016 and making awards by the end of August 2016.

Section VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. Notice of Selection

Selected Applicants Notification

DOE will notify applicants selected for award by email. This notice of selection is not an authorization to begin performance.

Non-selected Notification

Organizations whose applications have not been selected will be notified by email as promptly as possible. This notice will explain why the application was not selected. No debriefs or additional information will be provided.

Nondisclosure and Confidentiality Agreements Representations (January 2015)

In submitting an application in response to this FOA, the Applicant represents that it will not require its employees or contractors seeking to report fraud, waste, or abuse to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting such employees or contractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

2. Notice of Award

Notice of Award (December 2015)

An Assistance Agreement issued by the contracting officer is the authorizing award document. It normally includes either as an attachment or by reference: (1) Special Terms and Conditions; (2) Applicable program regulations, if any; (3) Application as approved by DOE; (4) 2 CFR part 200 as amended by 2 CFR part 910 [DOE Financial Assistance Regulation]; (5) National Policy Assurances To Be Incorporated As Award Terms; (6) Budget Summary; and (7) Federal Assistance Reporting Checklist, which identifies the reporting requirements.

For grants and cooperative agreements made to IHE, non-profits and other entities subject to Title 2 CFR, awards made under this funding opportunity should include the government-wide Research Terms and Conditions. A new version of the Terms and

Conditions based on the changes to 2 CFR 200 is not yet available. Once the Terms and Conditions become available, they will be located at <http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp>. If an award is made under this funding opportunity before the Terms and Conditions are posted, alternative Terms and Conditions may be included in the award.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

1. Administrative Requirements (December 2014)

The administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR part 200 as amended by 2 CFR part 910 (See: <http://www.eCFR.gov>).

DUNS AND SAM REQUIREMENTS

Additional administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR, Part 25 (See: <http://www.eCFR.gov>). Prime awardees must keep their data at the System for Award Management (SAM) current at <http://www.sam.gov>. SAM is the government-wide system that replaced the CCR. If you had an active registration in the CCR, you have an active registration in SAM. Subawardees at all tiers must obtain DUNS numbers and provide the DUNS to the prime awardee before the subaward can be issued.

2. Special Terms and Conditions and National Policy Requirements (December 2014)

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Award Terms.

The National Policy Assurances To Be Incorporated As Award Terms are located at <http://www.nsf.gov/bfa/dias/policy/rtc/appc.pdf>.

Intellectual Property Provisions. The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at: <http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards>.

Lobbying Restrictions. By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

Statement of Substantial Involvement

DOE anticipates having substantial involvement in the performance of awards made under this FOA. Substantial direct operational involvement/participation is anticipated to ensure compliance with the objectives of the Traineeship Program. This involvement includes but is not limited to collaboration as necessary with IHEs, participation in the management of the project and intervention in the activity, namely:

- Assist in publicizing traineeship opportunities (at no additional expense to the IHEs) on either a national, regional or local basis, as may be determined necessary by DOE;
- Reviewing and providing feedback to the IHE regarding its selecting students for receipt of traineeships as well participation in the decision as to whether a traineeship is continued.
- Reviewing and approving the IHE's proposed mechanism/plan for tracking program outcomes and evaluating program success. This could include requiring annual reports specifically on the evaluation activities and DOE access to questionnaire data. This includes development by the IHE and review/approval by DOE of a rigorous Program Evaluation Plan to address the following two questions regarding the execution of the program:
 1. Is the Traineeship program being run effectively and providing a high quality experience?
 2. Is the Traineeship program having an impact on its stated goal?
- Reviewing annual outcomes of the selection process of graduate student trainees for the two year program and approving the student selection.
- Reviewing the IHE role and implementation of evaluation activities and periodic technical reports to DOE.
- Serving in a technical liaison role with other program-sponsored organizations (e.g. DOE labs, centers, etc.).

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. The checklist is available at:

<http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Award Forms.

Section VII - QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Questions regarding the content of the announcement must be submitted through the

FedConnect portal. Applicants must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. It is recommended that applicants register as soon after release of the FOA as possible to have the benefit of all responses. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions and comments concerning this FOA shall be submitted not later than 10 calendar days prior to the application due date. Questions submitted after that date may not allow the Government sufficient time to respond.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. DOE/NNSA cannot answer these questions.

B. CONTACTS

The DOE contact for this FOA is:

Name: Shawn M. Tinsley
E-mail: tinslesm@id.doe.gov

Section VIII - OTHER INFORMATION

A. MODIFICATIONS

Notices of any modifications to this announcement will be posted on Grants.gov and the FedConnect portal. Applicants can receive an email when a modification or an announcement message is posted by registering with FedConnect as an interested party for this FOA. It is recommended that applicants register as soon after release of the FOA as possible to ensure applicants receive timely notice of any modifications or other announcements.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. COMMITMENT OF PUBLIC FUNDS

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

Funding for all awards and future budget periods are contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority.

D. PROPRIETARY APPLICATION INFORMATION

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

“The data contained in pages [*Insert pages*] of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the applicant.”

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

“The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation.”

E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL

In conducting the merit review evaluation, the Government will seek the advice of qualified non Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM – N/A

G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER – N/A

H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES

Eligible activities under this program include those which describe and promote the

understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

I. CONFERENCE SPENDING

The recipient shall not expend funds for the purpose of defraying the cost to the United States Government of a conference [described in subsection (c) of the Consolidated and Further Continuing Appropriations Act, 2013] that was more than \$20,000, or circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General or senior ethics official for any entity without an Inspector General, of the date, location, and number of employees attending such conference that is not directly and programmatically related to the purpose of the grant or cooperative agreement.