

U. S. DEPARTMENT OF ENERGY
OFFICE OF SCIENCE -- CHICAGO OFFICENATIONAL ENVIRONMENTAL POLICY ACT (NEPA)
ENVIRONMENTAL EVALUATION NOTIFICATION FORM

To be completed by "financial assistance award" organization receiving Federal funding. For assistance (including a point of contact), see "Instructions for Preparing SC-CH F-560, Environmental Evaluation Notification Form".

Solicitation/Award No. (if applicable): DE-SC0008433Organization Name: Texas A&M UniversityTitle of Proposed Project/Research: The Texas A&M Interdisciplinary Radioisotope Production and Radiochemistry ProgramTotal DOE Funding/Total Project Funding: \$351,250I. Project Description (use additional pages as necessary):A. Proposed Project/Action (delineate Federally funded/Non-Federally funded portions)**Federally Funded**

We have requested a total of \$351,250 to acquire new equipment and enhancements to our radiochemical facility and targetry system.

We are requesting funds to **upgrade** a Nirta Solid target system and ancillary equipment to adapt the target to the K150 cyclotron. The target system requires multiple systems and facility modifications to the K150 vault for its adaptation. The system requires pumps for water injection, a water chiller, an external control system, a helium system for front target cooling, and servomechanisms for target drop and lead pig locking. The upgrade is expected to cost approximately \$80,000.

We are requesting \$50,000 to **upgrade** our physical facilities before the installation of the new equipment. This renovation includes assessment of the floor load and reinforcement, installation of new plumbing and electrical systems, re-commissioning and certification of all ducts, and radiochemistry cabinets.

The remaining funds will be used to **upgrade** our hot cell. Under a previous DOE grant we will purchase a basic hot cell and radiochemical fume hood. In here we are requesting to upgrade these units. We want to upgrade the hot cell from a 3-panel Model 2444 to a vertical door model with retrieval side door and add CRL type GLD manipulators, include 4 gas lines, and acquire a waste and storage cabinets. The hot cell will be used for the production and separation of ^{64}Cu , ^{124}I , and $^{62}\text{Zn}/^{62}\text{Cu}$ generator. The radiochemical fume hood will be use for the distillation and production of ^{211}At .

Appendices A through E provide a full description of the facilities and affected environment under this award.

Appendix A

General description of the Cyclotron Institute.

Appendix B.

Description of the radiochemistry facility at the Cyclotron Institute. This is the facility that will be impacted under this award.

Appendix C.

Description of the radiochemistry facility at the Zachry Engineering Center. Facility were further experiments will take place. No funds will be used on this facility.

Appendix D.

Description of the NIRTA targetry system to be upgraded under this award.

Appendix E.

A description is given for the hot cell and radiochemical fume hood to be installed in the radiochemistry facility.

Appendix F.

A brief description of the separation apparatus for the production of Zn-62/Cu-62.

Appendix I.

Facility Effluent Monitoring Plan for the Cyclotron Institute. This document presents the monitoring program to be implemented once the facility is commissioned. The monitoring program describes in detail the facilities impacted by this award, the rationale for the design criteria for monitoring, the procedures for laboratory analysis and determination of activity levels in air effluents. It also provides the quality assurance requirements for the facility operation, reporting and implementation of procedures.

These appendices cover a description to responses in sections III.B and IV.A-C.

Non-Federally Funded

The radiochemistry room will be clear from asbestos and the air unit will be modified or adapted to attain the specifications of the manufacturer of the hot cell and radiochemical fume hood.

This radiochemical room has been without use/service for many years. It will be re-commissioned as a radiochemistry laboratory. There will be no affected rooms or areas due to the installation and modification of the facility.

- | | Yes | No |
|--------------------------------------------------------------|--------------------------|-------------------------------------|
| B. <u>Would the project proceed without Federal funding?</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If "yes", describe the impact to the scope:

II. Description of Affected Environment:

The floor of the radiochemical room will be raised approximately 10 inches in order to place a reinforced floor. A cross beam will be placed across the floor from one pillar to another making it feasible to place a load of approximately 50,000 lb. There will be the need to remove and modify water drains, water lines, and air handling system to attain a negative pressure, and sealing of the walls on all sides and on the top. A new door will be put in place and radiation monitors will be located at the exits lines of the radiochemical fume hood and hot cells as per facility management effluent regulations. No environmental impact is expected from these improvements to the facility.

III. Preliminary Questions:

- | | Yes | No |
|-------------------------------------------------------------------|--------------------------|-------------------------------------|
| A. <u>Is the DOE-funded work <i>entirely</i> a "paper study"?</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If "Yes", ensure that the description in Section I reflects this and go directly to Section V.

- | | | |
|-------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|
| B. <u>Will the work to be performed take place <i>entirely</i> in existing buildings?</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|-------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|

And NOT:

- | | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| 1. | Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. | Require the siting, construction or major expansion of waste treatment, storage, or disposal facilities? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. | Disturb hazardous substances, pollutants, or contaminants preexisting in the environment? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. | Adversely affect environmentally-sensitive resources identified in Section IV.A.? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. | Be connected to another existing/proposed activity that could potentially create a cumulatively significant impact? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. | Have an inherent <i>possibility</i> for high consequence impacts to human health or the environment (e.g., Biosafety Level 3-4 laboratories, activities involving high levels of radiation)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If "Yes" to Question III.B. and ALL six subsequent questions, ensure the descriptions in Sections I and II reflect this and go directly to Section V.

Appendices A, B, C, D, E, F, and I provide a full description of the facility renovations, radiochemistry facility description, equipment description, and environmental monitoring.

IV. Potential Environmental Effects:**Attach/insert an explanation for each "Yes" response.**A. Sensitive Resources: Will the proposed action result in changes and/or disturbances to any of the following resources?

- | | Yes | No |
|------------------------------------------------------------------------------------|--------------------------|-------------------------------------|
| 1. Threatened/Endangered Species and/or Critical Habitats | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Other Protected Species (e.g., Burros, Migratory Birds) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Sensitive Environments (e.g., Tundra/Coral Reefs/Rain Forests) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Archaeological/Historic Resources | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Important Farmland | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Non-Attainment Areas for Ambient Air Quality Standards | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Class I Air Quality Control Region | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Special Sources of Groundwater (e.g. Sole Source Aquifer) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Navigable Air Space | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Coastal Zones | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Areas with Special National Designation (e.g. National Forests, Parks, Trails) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Floodplains and Wetlands | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

B. Regulated Substances/Activities: Will the proposed action involve any of the following regulated items or activities?

- | | Yes | No |
|---------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|
| 13. Natural Resource Damage Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 14. Exotic Organisms | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 15. Noxious Weeds | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 16. Clearing or Excavation (indicate if greater than one acre) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 17. Dredge or Fill (under Clean Water Act, Section 404, indicate if greater than ten acres) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

B. Regulated Substances/Activities: Will the proposed action involve any of the following regulated Items or activities? (continued)

	Yes	No
18. Noise (in excess of regulations)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19. Asbestos Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. PCB's	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21. Import, Manufacture, or Processing of Toxic Substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22. Chemical Storage/Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23. Pesticide Use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24. Hazardous, Toxic, or Criteria Pollutant Air Emissions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25. Liquid Effluents	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26. Underground Injection	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27. Hazardous Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>
28. Underground Storage Tanks	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29. Radioactive Mixed Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>
30. Radioactive Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31. Radiation Exposure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
32. Surface Water Protection	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33. Pollution Prevention Act	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34. Ozone Depleting Substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35. Off-Road Vehicles	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36. Biosafety Level 3-4 Laboratory	<input type="checkbox"/>	<input checked="" type="checkbox"/>

C. Other Relevant Information: Will the proposed action involve the following?

	Yes	No
37. Potential Violation of Environment, Safety, or Health Regulations/Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38. Siting/Construction/Major Modification of Waste Recovery, or Waste Treatment, Storage, or Disposal Facilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39. Disturbance of Pre-existing Contamination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40. New or Modified Federal/State Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>
41. Public Controversy	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42. Environmental Justice	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43. Action/Involvement of Another Federal Agency (e.g. license, funding, approval)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44. Action of a State Agency in a State with NEPA-type law. (Does the State Environmental Quality Review Act apply?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
45. Public Utilities/Services	<input type="checkbox"/>	<input checked="" type="checkbox"/>
46. Depletion of a Non-Renewable Resource	<input type="checkbox"/>	<input checked="" type="checkbox"/>
47. Extraordinary Circumstances	<input type="checkbox"/>	<input checked="" type="checkbox"/>
48. Connected Actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
49. Exclusively Bench-top Research	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50. Only a Laboratory Setting	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. Financial Assistance Award Organization Concurrence:

A. Organization Official (Name and Title): Gamal Akabani, PhD

Signature:  Digitally signed by com.apple.ubiquity.peer-uid.D5DDE72A-1120-4E2F-9491-6DCFA3038E90
DN: cn=com.apple.ubiquity.peer-uid.D5DDE72A-1120-4E2F-9491-6DCFA3038E90, c=US
Date: 2012.09.14 14:48:21 -0600 Date: 9/14/12

e-mail: akabani@tamu.edu Phone: 979-458-1699

B. Optional Concurrence (Name and Title): _____

Signature: _____ Date: _____

Remainder to be completed by SC-CH

VI. SC-CH Concurrence/Recommendation/Determination:

A. SC-CH Office of Acquisition and Assistance or Office of Safety, Technical & Infrastructure Services:

Project Director or Contract Specialist (Name and Title): _____

Signature: _____ Date: _____

B. SC-CH NEPA Team Review:

Is the project/activity appropriate for a determination or a recommendation to the Head of the Field Organization by the NEPA Compliance Officer (NCO) under Subpart D of the DOE NEPA Regulations?

Yes No

Specific class(es) of action from Appendices A-D to Subpart D (10 CFR 1021): B3.10

Name and Title: Peter R. Siebach, NCO

Signature: [Handwritten Signature] Date: 9/14/2012

C. SC-CH Counsel (if necessary):

Name and Title: _____

Signature: _____ Date: _____

D. SC-CH NEPA Compliance Officer:

The preceding pages are a record of documentation required under DOE Final NEPA Regulation, 10 CFR 1021.400.

Action may be categorically excluded from further NEPA review. I have determined that the proposed action meets the requirements for Categorical Exclusion referenced above.

Action requires approval by Head of the Field Organization. Recommend preparation of an Environmental Assessment.

Action requires approval by Head of the Field Organization or a Secretarial Officer. Recommend preparation of an Environmental Impact Statement.

Comments/Limitations if necessary:

Signature:



Date:

9/14/2012

Peter R. Siebach
SC-CH NEPA Compliance Officer