PMC-ND
(1.08.09.13)

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION

RECIPIENT: Scientific Solutions, Inc. **STATE:** NH

PROJECT TITLE: Standardized Drifting Noise Measurement Systems and Integrated Data Products

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000971	DE-EE0006786	GFO-0006786-002	

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering, analysis, and dissemination	Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
B3.6 Small-scale research and development, laboratory operations, and pilot projects	Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Scientific Solutions, Inc. (SSI) to develop a robust, commercialized, affordable, and readily available drifting noise measurement system (DNMS) for use by the marine hydro-kinetic (MHK) community during development, installation, operation, and maintenance of MHK devices.

This award previously received a NEPA determination (GFO-0006786-001; CX-A9; 9/04/2014) for activities associated with BP1, Task 1 and Subtasks 2.1.1-2.1.5 which included the establishment of requirements, data products definitions and identification of the test site; preliminary design and design review; and control and acquisition software development. The purpose of this NEPA determination is to review remaining subtasks under Task 2 (Subtasks 2.1.6-2.3.3) as well as all of Task 3. Remaining subtasks under Tasks 2 and 3 are as follows:

Task 2 Deployable Noise Measurement System Design and Build-Test- Build
* Subtask 2.1.6: Prototype build
* Subtask 2.1.7: Validation testing
* Subtask 2.1.8: Prototype integration
* Subtask 2.1.9: Prototype field testing
* Subtask 2.2.1: Revise and complete design elements
* Subtask 2.2.2: Final design review
* Subtask 2.2.3: Control and data acquisition software refinement
* Subtask 2.2.4: Candidate build and validation test
* Subtask 2.2.5: Mature system integration and field test
* Subtask 2.3.1: Hardware refinements
* Subtask 2.3.2: Software refinements
* Subtask 2.3.3: Final review and plan for production

Task 3 Data Analysis and Signal Processing Algorithm Development
* Subtask 3.1: Signal conditioning

* Subtask 3.2: Data Processing
* Subtask 3.3: Turnkey interface
* Subtask 3.4: Refinements and tuning

Proposed project tasks would include computer modeling, design, and laboratory work. This work includes the fabrication (2.1.6), in-lab validation (2.1.7), and integration of SSI's prototype DNMS (2.1.8); the revision, completion (2.2.1) and final review (2.2.2) of designs; control and data acquisition software refinement (2.2.3); fabrication and in-lab validation of candidate DNMS (2.2.4); creation of the production plan (2.3); ; signal conditioning/data screening (3.1); data processing (3.2); creation of a turnkey interface (3.3); and refinement of the data analysis and signal processing algorithm (3.4). All design, modeling, software development, light industrial assembly and lab testing would take place at SSI's office and lab facility in Nashua, NH. All proposed activities would take place in existing facilities designed for this type of activity; therefore, no new construction, modifications or new permits, additional licenses and/or authorizations would be necessary.

Proposed project tasks would also include field testing of a completed spar buoy prototype with an electronics canister suspended by cabling below (Subtasks 2.1.9 and 2.2.5). It is anticipated, but not yet finalized, that field testing would occur in Sequim Bay, Pacific Northwest National Labs (PNNL). Detailed plans, including location and potential impacts, including biological impacts, for these tasks are not known, and therefore a meaningful NEPA review cannot be completed for these tasks at this time. DOE will complete additional NEPA review when additional information is available and prior to authorizing the expenditure of federal funds for these subtasks.

The project may involve the use and handling of various hazardous materials, including metals and industrial solvents. All such handling would occur in-lab at SSI's NH facility. All hazardous materials would be managed in accordance with federal, state, and local environmental regulations. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. Minimal waste may be generated in association with fabrication and assembly of the deployable noise measurement boy prototype. Such waste will be disposed of in accordance with SSI's normal operating procedures, as dictated by local and federal regulations. No siting, construction or major expansion of waste storage, disposal, recovery, or treatment actions/facilities would be required.

Based on the information above, DOE has determined that this project (with the exception of subtasks 2.1.9: Prototype Field Test and 2.2.5: Completion of Mature Candidate Field Test that cannot be reviewed at this time) is consistent with actions outlined in DOE categorical exclusions A9 "Information gathering, data analysis, and information dissemination" and B3.6 "small-scale research and conventional laboratory operations" and is therefore categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:
Subtask 2.1.9: Prototype Field Test
Subtask 2.2.5: Completion of Mature Candidate Field Test

This restriction does not preclude you from:
Task 1: Establish requirements, data products definition, and test site (all subtasks)
Subtask 2.1.1: Preliminary Design
Subtask 2.1.2: Preliminary Design Review
Subtask 2.1.3: Detailed Design
Subtask 2.1.4: Critical Design Review
Subtask 2.1.5: Control and Data Acquisition Software Development
Subtask 2.1.6: Prototype Build and Validation Test
Subtask 2.1.7: Validation Testing
Subtask 2.1.8: Prototype Integration
Subtask 2.2.1: Revise and Complete Design Elements
Subtask 2.2.2: Final Design Review

Subtask 2.2.3: Control and Data Acquisition Software Refinement
Subtask 2.2.4: Candidate Build and Validation Test
Subtask 2.3.1: Hardware Refinements
Subtask 2.3.2: Software Refinements
Subtask 2.3.3: Final Review and Plan for Production
Task 3: Data Analysis and Signal Processing Algorithm Development
And, conducting environmental/biological assessments as deemed necessary by PNNL

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Water Power Program
This NEPA determination requires a tailored NEPA provision.
Review completed by Rebecca McCord, 07/27/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin Date: 8/13/2015
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager