PMC-EF2a
(2/04/02)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: Stevens Institute of Technology **STATE:** NJ

PROJECT TITLE : Field Evaluation and Validation of Remote Wind Sensing Technologies - Shore-Based and Buoy Mounted LIDAR Systems

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000414	DE-EE0005375	GFO-0005375-001	EE5375

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.)

B3.1 Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

B3.16 Research activities in aquatic environments

Small-scale, temporary surveying, site characterization, and research activities in aquatic environments, limited to: (a) Acquisition of rights-of-way, easements, and temporary use permits; (b) Installation, operation, and removal of passive scientific measurement devices, including, but not limited to, antennae, tide gauges, flow testing equipment for existing wells, weighted hydrophones, salinity measurement devices, and water quality measurement devices; (c) Natural resource inventories, data and sample collection, environmental monitoring, and basic and applied research, excluding (1) large-scale vibratory coring techniques and (2) seismic activities other than passive techniques; and (d) Surveying and mapping. These activities would be conducted in accordance with, where applicable, an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices. None of the activities listed above would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity, unless authorized by the agency responsible for such refuge, sanctuary, or area (or after consultation with the responsible agency, if no authorization is required). If the proposed activities would occur outside such refuge, sanctuary, or area and if the activities would have the potential to cause impacts within such refuge, sanctuary, or area, then the responsible agency shall be consulted in order to determine whether authorization is required and whether such activities would have the potential to cause significant impacts on such refuge, sanctuary, or area. Areas of high biological sensitivity include, but are not limited to, areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may vary seasonally. No permanent

facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells.

A11 Technical advice and assistance to organizations — Technical advice and planning assistance to international, national, state, and local organizations.

Rational for determination:

DOE is proposing to provide federal funding to Stevens Institute of Technology (SIT) to validate two types of light detection and ranging (LIDAR) based wind measurement systems for use in the offshore environment in the Mid-Atlantic east of the New Jersey coast. This study would include information gathering, data analysis, technical advice, modeling, mapping, and reporting.

SIT would validate and certify Lidar-based wind measurement systems on four onshore existing meteorological towers and three existing buoys. Wind measurement data would be collected from the existing anemometers on four met towers (ACUA Recycling Center, Somers Point, Rutgers University, and Stockton Campus), shore based Fisherman's Energy Windtracer LIDAR, and three Fisherman's Energy buoys. The different data sets collected would be modeled and compared between LIDAR, buoys, and meteorological towers. Transportation to and from the meteorological towers and buoys would be by a water taxi service (that follows all US Coast Guard safety and operating procedures). The data collected would be modeled, mapped, and analyzed by researchers to characterize wind profiles offshore.

The proposed action would not involve ground disturbing activities. None of the activities listed above would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity. It is anticipated that the proposed action would not result in any impact Threatened or Endangered (T&E) species, T&E critical habitats, marine sanctuary or wildlife refuge, governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity, due to the existing conditions at the meteorological towers and buoys. It is anticipated that the proposed action would not result in any impact cultural resources or historic properties, due to the existing conditions at the meteorological towers and buoys.

There should be no hazardous or solid waste generated with this proposed project. This project comprises information gathering, technical advice, site characterization, and research in aquatic environments; therefore the DOE has categorized this project into Categorical Exclusions A9, A11, B3.1 and B3.16.

Budget: $702,000 (DOE); $175,500 (cost share)

Condition of Approval: Where applicable, Stevens Institute of Technology and their contractors will acquire any necessary permission prior to engaging in any action or task that would be subject to oversight from NOAA or the Coast Guard or require consent from private property owners.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:
Where applicable, Stevens Institute of Technology and their contractors will acquire any necessary permission prior to engaging in any action or task that would be subject to oversight from NOAA or the Coast Guard or require consent from private property owners.

Note to Specialist :

EF2A by Christopher Carusona II

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By Lori Gray /Lori Gray/ Date: 3/26/2012
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