

PMC-EF2a

(20102)

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



RECIPIENT: Arizona Geological Survey

STATE: NV

PROJECT TITLE : Recovery Act: State Geological Survey Contributions to the National Geothermal Data System_NV

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000109	DE-EE0002850	GFO-0002850-NV1	GO2850

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:

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.

B3.6 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.

Rational for determination:

DOE and cost share funding would be applied to expanding and enhancing the National Geothermal Data System (NGDS) by creating a national, sustainable, distributed, interoperable network of state geological survey-based data providers that will develop, collect, serve, and maintain geothermal-relevant data that operates as an integral compliant component of NGDS. Arizona Geological Survey (AZGS) would bring data from the State Geological Surveys into the NGDS, by digitizing at-risk legacy, geothermal-relevant data (paper records, samples, etc), publishing existing digital data using standard NGDS data services, and through limited collection of new data in areas lacking critical information.

All tasks within the original SOPO were categorically excluded under CX A9 by GFO-10-085 on April 16, 2010 because they all concerned the gathering, analysis, and dissemination of data via reports, publications, and the development of computer software and web-based programming. However, subsequent to that NEPA determination, additional funding was added into the award which provided the opportunity for various state geological surveys (acting as subcontractors to this award) to expand the scope of Subtask 2.4 to include collection of new data by field work, drilling of investigation wells, etc. States which expand Subtask 2.4 to include any of these activities will require additional NEPA analysis of Subtask 2.4 because field activities fall outside of the CX A9 from the original determination. All other tasks and subtasks (with the exception of Subtask 2.4) remain covered by the original NEPA

determination (GFO-10-085). The original SOPO has been modified to distinguish between the states participating in the expansion of Subtask 2.4 to facilitate the multiple NEPA reviews that will be necessary for this award. This NEPA determination is specific to the project proposed by the Nevada Bureau of Mines and Geology (NBMG).

Subtask 2.4 (N) – Collection of New Data – Nevada

This task involves the drilling, logging, and sampling of new temperature gradient (TG) wells in the state of Nevada. NBMG would drill a few new wells at the Reno-Tahoe International Airport and at Emerson Pass on the Pyramid Lake Indian Reservation. Water samples would be collected from approximately 20 well/spring sites within walking distance from existing roads (please see attached map). Sampling would be done by hand using equipment that fits easily into a backpack. Samples would be analyzed at a commercial lab and/or at the Desert Research Institute (DRI) lab. Shallow temperature and soil gas surveys would be conducted at 2 locations (likely at Pinto and Charnock). These surveys would be performed using an ATV-mounted demolition hammer to insert 2-meter probes. The surveys would take place on BLM land and follow the guidelines approved by BLM.

At the Emerson Pass drilling site, three to six temperature gradient wells would be drilled. Thirteen possible drilling locations have been targeted to allow for maximum flexibility in site selection once out in the field. All possible drilling locations were surveyed for cultural and biological resources. No impacts to cultural resources, threatened or endangered species, or special status species would occur as none of those resources were found to be present in the project area. The project would not disturb the scarce vegetation in the drilling areas. The vegetation may be compacted by vehicle movement but would remain intact to provide soil stabilization and reduce dust mobilization. There are no receptors for noise impacts or surface water for water resources impacts in the project area. Access to the drilling locations would be by existing roads. The recipient and/or its subcontractors would follow all established laws and regulations of the Pyramid Lake Paiute Tribe to protect the environment. If there is a discovery of any previously unidentified cultural, paleontological, or cave related resource that may be altered or destroyed by the operations, the discovery would be left intact and reported to the appropriate PLPT representative, who would evaluate the discovery, and take immediate action to protect, remove or preserve the resource.

The location of the well at the Reno-Tahoe International Airport would be on an undeveloped plot of land (previously a subdivision) on the southwest side of the airport. Access to the drill site is by existing roads. The Reno-Tahoe Airport Authority (RTAA) will provide personnel to survey all underground utilities such that all utilities will be completely avoided in selection of the final drilling target. NBMG has a Geothermal Assessment Agreement in place with the RTAA for the drilling and assessment activities that would occur at the airport. Permits are in place with the Nevada Division of Minerals for the drilling. The Federal Aviation Administration has no objections to the drilling with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground as long as the conditions stated in the Final Determination are followed (see uploaded document RNO Geothermal Drill Rig 7460 Air Space Evaluation.pdf).

Based on review of the project information, DOE has determined that the additional activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that these activities are consistent with actions contained in DOE categorical exclusions B3.1 "Site characterization and environmental monitoring," and B3.6 "Small-scale research and development, laboratory operations, and pilot projects," and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

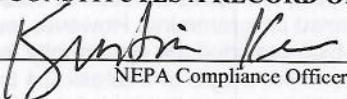
If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Casey Strickland 6/19/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____


NEPA Compliance Officer

Date: 7/8/2013

FIELD OFFICE MANAGER DETERMINATION