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NUCLEAR REGULATORY COMMISSION

[NRC-2012-0271]

Geologic Trench Excavation for Paleoliquefaction Study at Garner and Stiles Sites

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has prepared an Environmental Assessment (EA) to evaluate the potential environmental impacts that may arise as a result of excavating trenches to observe geologic features for a paleoliquefaction research project at two sites located in northeastern Arkansas. The NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate.

DATES: [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Please refer to Docket ID **NRC-2012-0271** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2012-0271**. Address questions about NRC dockets to Carol Gallagher;

telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**

You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if it available in ADAMS) is provided the first time that a document is referenced. The EA and the associated FONSI are publicly available in ADAMS under Accession No. ML15287A224.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

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SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC is performing a paleoliquefaction research project to characterize past earthquakes in the Central and Eastern United States. Geologic observations of paleoliquefaction, defined as historic or pre-historic liquefaction, in excavated trenches are

planned at two sites in northeastern Arkansas. Liquefaction features are geologic features such as sand blows and sand dikes formed during earthquakes as a result of ground shaking and water pressure developed in the ground during shaking. The results from this research will be used to update models implemented in probabilistic seismic hazard analyses to characterize ground motion at new nuclear power plant sites in accordance with the NRC's regulation in section 100.23(d)(1) of title 10 of the *Code of Federal Regulations* (10 CFR). The results of this research may also be implemented to re-evaluate seismic hazards at existing nuclear power plant sites.

The NRC has prepared an EA to evaluate the potential environmental impacts that may arise as a result of this research project in accordance with the requirements of 10 CFR part 51, the NRC's regulations that implement Section 102(2) of the National Environmental Policy Act of 1969, as amended. Based on the EA, and in accordance with 10 CFR 51.31(a), the NRC has concluded that a FONSI is appropriate. The excavation of the trenches at the two sites in northeastern Arkansas will commence following publication of this Notice.

II. EA Summary

The NRC has prepared the EA to evaluate the potential environmental impacts of the excavation of the trenches at two sites in northeastern Arkansas, described in the EA as the Garner and Stiles sites. In accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), the NRC staff requested informal consultation with the United States Fish and Wildlife Service. No concerns were identified for Federally-listed species or designated critical habitat. This project is temporary, minimally invasive, and will occur outside the critical nesting times for migratory birds.

The NRC determined that the proposed excavation of the trenches will result in no adverse effects to any historic or cultural resources that may be located at the Garner or Stiles sites. The NRC's evaluation of archeologic artifacts discovered at the Garner site concludes

that the site is ineligible for the National Register of Historic Places (NHRP). The Arkansas State Historic Preservation Officer stated in a September 3, 2014, letter to the NRC that NHRP eligibility for the Garner site is undetermined and noted that the proposed excavation of the trenches is similar to NRHP significance testing. If significant archeological material data is uncovered at the Garner site, the NRC will complete the appropriate NRHP-eligibility testing. Portions of the NRC contractor prepared site evaluation report, referenced in the EA, have been redacted and are being withheld from public review for the purpose of protecting potential archaeological and cultural resources in accordance with Section 304 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 307103).

In its September 3, 2014 letter, the Arkansas State Historic Preservation Officer (SHPO) was supportive of the proposed excavation of the trenches at both sites. The Arkansas SHPO concurred with the NRC regarding no adverse effects at the Stiles site. The Quapaw Tribe has concurred with the Arkansas SHPO findings.

The NRC has determined that there will be no significant impacts to any other resource areas (e.g., surface water, groundwater, air quality) as a result of the proposed excavation of the trenches.

III. Finding of No Significant Impact

On the basis of the EA and as further described in the FONSI, the NRC has concluded that there are no significant environmental impacts from the proposed excavation of the trenches and has determined not to prepare an environmental impact statement.

Dated at Rockville, Maryland this 14th day of October, 2015.

For the Nuclear Regulatory Commission.

John P. Burke, Chief,
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