

PMC-EF2a

(20402)

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



RECIPIENT:Alcoa, Inc

STATE: NC

PROJECT TITLE : Cheoah 1-4 Modernization

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000120	DE-EE0002671	GFO-10-087	0

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:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

Alcoa Power Generating Inc. (APGI) is proposing to use ARRA funding through DOE to implement major upgrades at its Cheoah hydroelectric facility near Robbinsville, NC.

Tasks include:

- Task 1 – Complete Detailed Engineering Documentation
- Task 2 – Project Mobilization
- Task 3 - Begin Pre-Outage Construction and Complete Unit 2 Demolition
- Task 4 - Unit 1-4 Substation Outage
- Task 5 - Unit 2 Installation
- Task 6 - Unit 4 Outage and Installation
- Task 7 – Project Management

Alcoa's objectives are to purchase four new high-efficiency turbines, generators, and transformers, upgrade the balance of plant equipment, and complete installation of the units. Each unit currently produces 22MWs and the new upgrades will increase each unit by 5.5MWs at a minimum. The proposed two-year project will increase site-wide generating capacity from 96MW to 129MW.

The new equipment will increase turbine efficiency for better use of available water, eliminate more than 60% of oil currently on site, provide secondary containment for transformers, eliminate water cooling of transformers and their discharge stream, eliminate greased bushings near the water passage, address lead paint and asbestos on the four units, and reduce the noise level on the generator floor of the powerhouse.

The new equipment being installed is considered to be a more fish friendly technology than the current equipment.

Archaeologists identified no national register eligible archaeological sites and recommended no further study at the Cheoah Reservoir.

Alcoa has established safety protocols in place which follow OSHA Safety Standards. These will apply for construction and operation activities

Permits and Existing NEPA Documentation:

FERC Environmental Assessment for FERC License – Determination by FERC states, " FERC concludes that licensing the project, with staff's recommended measures, would not constitute a major federal action significantly

affecting the quality of the human environment."

FERC License 2169-020 - Order approving Settlement and Issuing New License, Issued January 25, 2005 (Current FERC license incorporating Tapoco upgrades)

Department of the Interior - Section 18 Fishway Prescription (completed)

Tennessee 401 Water Quality Certification (completed)

North Carolina 401 Water Quality Certification (completed)

Forrest Service Section 4(e) Provisions

A new NPDES permit will be required from the State of North Carolina for the addition of a new storm water discharge point into the Cheoah River. The end result of the project will reduce the volume of non-contact cooling water, but the addition of a new discharge point will require the new permit.

Hazardous Materials:

The existing facilities are in excess of 90 years old and asbestos has been surveyed and identified. It is known to be present in existing generator windings and plant electrical equipment. These materials will be abated by a licensed contractor and disposed of by Alcoa's hazardous waste contractor, Waste Management, at a Alcoa approved and licensed disposal facility.

The Cheoah facility meets all RCRA hazardous waste requirements as required by the state of North Carolina. Cheoah is classified as a small quantity generator.

Environmental Measures/Applicant Committed Actions based on the FERC EA:

1. Develop a Drought Management Plan (DMP), in consultation with the resource agencies and municipalities that would be implemented during periods of extreme low flow.
 2. Develop a Shoreline Management Plan (SMP) to address shoreline protection, shoreline development and the identification and protection of critical habitat areas.
 3. Develop a Tallassee Watershed Trust Fund to provide continuing environmental and social enhancements associated with the continued operation of the Tapoco Projects.
 4. Develop a North Carolina Resource Management and Enhancement Fund to provide continuing environmental and social enhancements associated with the continued operation of the Tapoco Projects.
 5. Develop a vegetation management plan (VM1) to protect rare plant species found within the Project, mitigate potential impacts associated with invasive exotic plant pests (IEPP) and their management, and manage on along Project right-of-ways associated with transmission lines and pipelines.
 6. Develop a Cultural Resources Management Plan for the Project.
 7. Develop a rare, threatened, and endangered species plan (RTE1) to enhance rare, threatened and endangered (RTE) species and their habitats at the Project.
 8. Assist state resource agencies in a put-take-and-grow trout stocking effort in the Cheoah Reservoir. Funds for trout stocking would come from the Tallassee Watershed Trust Fund and the North Carolina Trust Funds established by APGI for a variety of enhancements, including aquatic habitat enhancement, fish restoration, and watershed protection.
 9. Develop a canoe portage around Cheoah Dam.
 10. Improve bank fishing facilities on Cheoah Reservoir.
 11. Relocate the panel branch boat access to Llewellyn Branch
- Additional FERC Recommended Measures (as applicable to Cheoah Dam project actions)
12. Modify the existing Magazine Branch free public access area for whitewater take-out by adding a circular turn around and parallel parking.

13. Construct US 129 free access areas. Construct facilities located at mile markers 3.3 and 6.1 for fishing, boating, and day use. Provide gravel parking areas at mile markers 5.1, 4.9, 2.3, and 1.1.
14. Based on input from the USFS, AW, and WCP, clear portions of the Cheoah River channel of woody vegetation, as deemed necessary by those groups, at a cost not to exceed \$70,000 per 10-year period of the license.
15. Developed and implemented a monitoring plan for the Appalachian elktoe mussel and its host fish to study specific effects of any new flow regime and its host fish. If after a five year test period, significant impacts to these species are found, the flow regime should be adjusted to attempt to eliminate these impacts, however any adjustment should not reduce the number of weekend days of recreational releases that occur annually at an optimal range of flows for whitewater boating.
16. Notify interested parties via email and internet website, including but not limited to AW, CCC, and WCP, as soon as is practicable, when an uncontrolled spill is forecasted and provide, when possible, the approximate flow level and predicted duration of the spill.
17. Provide the public, via website with an annual schedule of recreational flows in November of the year prior to those releases.
18. Provide a toll-free phone service that provides the public with real-time flow information based on the USGS gauge, as well as notification of anticipated uncontrolled spills, and a schedule of recreational releases for the year.
19. Retain current natural condition project lands in the Yellow Creek Watershed and allow public access to those lands.

Alcoa commits to the fore-mentioned environmental protection and mitigation measures as specified in the FERC Environmental Assessment (Measures #1-19). Based on these measures and acquisition of the permits and provisions discussed above (Department of the Interior - Section 18 Fishway Prescription Tennessee 401 Water Quality Certification, North Carolina 401 Water Quality Certification, Forrest Service Section 4(e) Provisions, State of North Carolina NPDES permit; DOE deems impacts from this project to be less than significant.

This project comprises "actions to conserve energy" by means of improvements in generator efficiency; therefore a CX B5.1 applies.

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:

Comply with all environmental mitigation measures and additional FERC recommended measures per the FERC Project No. 2169-020 Environmental Assessment issued March 15, 2004.

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:


NEPA Compliance Officer

Date:

3/1/10

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NEPA 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

Also commits to the low-carbon environmental protection and mitigation measures as specified in the FEREC Environmental Assessment (MEASURES 47-76) based on these constraints and conditions of the permit and provisions discussed above (Department of the Interior - Bureau of Land Management, Western Region, 401 Water Quality Calculator, North Carolina 401 Water Quality Calculator, Forest Service Section 4(a) Provisions, State of North Carolina NPDES permit DOE does not impact from this project to be less than significant.

The project complies with actions to conserve energy by means of improvements in general efficiency, therefore a CX is not required.

NEPA PROVISION

DOE has made a final NEPA determination for this event.

Insert the following language in the event:

Insert the following language in the event:

You do not require to

Comply with all environmental mitigation measures and additional FEREC recommended measures per the FEREC Project for 2184-030 Environmental Assessment issued March 18, 2004.

Yes a specific:

None Given:

REGISTRAR OF THE NATIONAL ARCHIVES/STATE ARCHIVES OF THE DISTRICT OF COLUMBIA

NEPA Compliance Officer Signature: _____

DATE: 3/1/10