PMC-EF2a

(2.04.02)

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

RECIPIENT: Missouri Department of Natural Resources **STATE:** MO

PROJECT TITLE: Noranda

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA000052	EE0000131		EE131

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:

The Missouri Department of Natural Resources (DNR) proposes to provide $1,000,000 of SEP funds to Noranda Aluminum to implement process efficiencies at Noranda's alumina refinery in New Madrid, Missouri. Noranda is a leading North American producer of primary aluminum products and rolled aluminum coils. Noranda is the largest single user of electricity (480 MW at a 98% load factor) in Missouri and one of the largest users of natural gas (1.4 trillion cu.ft. per year). SEP funds will be used for construction, capital purchases, and labor for equipment installation.

The project includes construction and commissioning of an improved system to process, mix and transfer raw materials (mainly cryolite "bath" and alumina) to smelting pots. Equipment would include a rotary breaker for size reduction of bath material, a vibrating screen for sizing the bath, six storage silos for holding bath and alumina, two mixing screw conveyors for blending bath and alumina, surge tanks to store blended raw materials, and conveyor systems to transport the materials to the pot lines. The proposed process would manage approximately 340 tons per day of material.

The objective of the project is to supply a consistently uniform feed material to the process, thereby optimizing the Hall-Heroult reduction process. Increased process efficiencies from the project are expected to reduce electricity usage by approximately 10,000 megawatt-hours (mWh) annually and increase aluminum production by approximately 3.96 million pounds (MMlbs) annually.

Potential environmental impacts of the project and associated actions include:

Air Quality

Noranda is considered a major source (as defined in the Clean Air Act) for air quality permitting purposes. To support DOE's NEPA review of the proposed Anode Cover Project, ICF technical experts performed an analysis of the potential impacts of the particulate matter (PM) emissions from the proposed project based on the results of air quality modeling performed for review of Noranda's Prevention of Significant Deterioration (PSD) permit and provided by the DNR.

The attached Technical Memorandum describes the details of the analysis including methodology, a review of the model used for the PSD permit, and the conclusions. The assessment was limited to PM emissions because the proposed Anode Cover Project would not produce emissions of other air pollutants. The assessment of the potential

impacts of the PM emissions from the proposed project was based on the results of air quality modeling performed for review of Noranda's PSD permit and provided by the DNR. The assessment indicates that the proposed Anode Cover Project PM10 emissions would not cause or contribute to a violation of the PM10 National Ambient Air Quality Standards (NAAQS) or the annual PSD increment, but would contribute to an exceedance of the 24-hour PSD increment in only one modeled instance at only one specific modeling location.

Four areas were included in the Class I analysis. The maximum impact was reported at the Upper Buffalo Wilderness Area in Arkansas with a 24-hour average concentration of 0.0184 µg/m3 and an annual average concentration of 0.000296 µg/m3. Both of these modeled impacts are well below the Class I 24-hour SIL of 0.3 µg/m3 and the Class I annual SIL of 0.2 µg/m3. Accordingly, the PM10 emissions of the proposed Anode Cover Project would not lead to a PSD-significant air quality impact in Class I areas.

The DNR PSD Permit states that, based on the modeling reviewed by the Air Pollution Control Program staff, the study submitted by Noranda demonstrates that Noranda will not contribute to any violation of the NAAQS or available increment.

Biological Resources

The footprint of the facility would not change as a result of this project, no soil would be disturbed and no new buildings need to be constructed. Therefore, no impacts to biological resources including threatened or endangered species, general wildlife or sensitive habitat are expected. The project is not located in a wetland or a floodplain.

Historical Resources

The portion of the plant where the new anode cover handling system would be installed was completed in 1983 and improved in 1999. Therefore, minor internal building modifications needed to accommodate installation of the new equipment would not affect any historic resources.

Waste

Noranda has a "Solid Waste Manual" and a "Spill Prevention Control & Countermeasure Plan" (SPCCP) that they follow. Both documents are attached in the PMC. The "Solid Waste Manual" describes an ongoing sampling and analysis program for waste streams from the plant and is designed to meet requirements of both the US EPA and Missouri DNR.

During the construction and installation of the new equipment only incidental structural changes would occur such as; modifications to pipe, pump and valve supports, day pumps and dust collectors. Noranda states the facility contains no lead paint or asbestos. Noranda plans to dismantle and dispose of approximately 1500 ft of 6" pipe system, two dense phase pumps, and some electrical and switching components. They plan to rebuild and reuse day tanks and dust collectors. Equipment would be disposed with Noranda's recycled steel pile to the extent possible, and everything that cannot be recycled would go to a non-hazardous landfill. If any hazardous waste is generated in this process it would be managed in accordance to Noranda's "Solid Waste Manual".

Once the project is installed and the process is operational there would be no hazardous waste generated. All materials associated with this project are granular. All non-hazardous waste would be collected by dust collectors and disposed of in a landfill. All PM emissions associated with this process would be captured in baghouses and re-introduced into the process. According to Noranda, there would be no disposal of any particulate matter that is captured in the baghouses. The improved process would not have any wastewater discharges or any liquid waste.

DOE has determined that the installation of the process improvement equipment will not have a significant impact to human health or the environment. The proposed project would reduce the use of fossil fuel energy consumption; therefore, the proposed project is categorically excluded from further NEPA review under CX B5.1

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Prepared by Chris Paulsen

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 3/17/2011
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