PMC-EF2a
(2.04.02)

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

RECIPIENT: Missouri DNR, Division of Energy **STATE:** MO

PROJECT TITLE : MO - IEEP: Buckman USA - TIER II: Insulation Project and Boiler Control System

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-000052	EE0000131	GFO-0000131-014	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 proposes to provide $45,261 of SEP funds to the Buckman Laboratories located at 4664 E. State Hwy 47 in Cadet, MO, an isolated unincorporated rural setting in Washington County. Buckman is a chemical manufacturing facility consisting of two processing buildings, three tank farms, rail and truck loading/unloading stations, a utility building, a water treatment building, a maintenance/welding shop, a warehouse, and an office building.

Buckman proposes to complete energy efficiency improvements as follows:

1) Replace 500' of old insulation on the plant's main 4" steam supply header. This 4" header runs from the boiler house to the two processing buildings. Proposed work includes removal of existing fiberglass insulation, and installation of 4"x2" thick foam glass insulation with all service jacket (ASJ) and aluminum cover. The goal of this work is to reduce fuel consumption and green house gas emissions by improving the overall insulating efficiency of this pipe run by 20%.

2) Replace 300' of old insulation on the plant's main 2" condensate return header. This 2" header runs from the two processing buildings to the boiler house. Proposed work includes removal of existing fiberglass insulation and installation of 2"x1 1/2" thick polyisocyanurate insulation with ASJ and aluminum cover. The goal of this work is to reduce fuel consumption and green house gas emissions by improving the overall insulating efficiency of this pipe run by 20%.

3) Install a linkageless boiler control system with O2 trim on the plant's main 400 HP boiler. Proposed equipment items include a Siemans LMV-52 control unit, programming display, flame detector, (3) digital input actuator motors (1 for air damper, 1 for natural gas, 1 for fuel oil), flue gas collector, O2 sensor, steam pressure transmitter, and start-up service. The goal of this work is to increase overall boiler operating efficiency by 1.3%.

Since this project includes only equipment upgrades in an existing building and replacement of existing insulation, there will be no new disturbance and no impacts to biological resources are expected.

Air Emissions
Buckman anticipates that the total estimated annual air emission reduction from the insulation replacement will be 206.4 MT of CO2/kWH/Yr. The total estimated annual air emission reduction from the boiler control replacement is 299.9 of CO2/kWH/Yr. Overall estimated annual emission reduction from this project will be approximately 506.3 of CO2/kWH/Yr. Buckman's estimates are attached in the PMC.

Waste Stream
There would not be a continuous waste streams generated by the proposed project. The old insulation from the 4" steam line and 2" condensate line would be placed in the plant's dumpster and be disposed of in a landfill by Waste Management. The existing aluminum insulation covers will be placed in the plant's metal dumpster. Shapiro Brothers Inc. picks up the material in this dumpster for recycling. The waste stream plan is attached in the PMC.

SHPO
The Buckman Cadet Plant was constructed in 1980 and expanded in1988. Therefore, this project falls under the Programmatic Agreement between the Missouri DNR- Division of Energy, The Missouri SHPO and the US Dept of Energy and is categorically exempt from further review because the is less than 45 years old. The PA is attached in the PMC.

DOE has reviewed the information for the proposed project and determined that this project does not pose a significant impact to human health or the environment. Therefore, this project is Categorically Excluded under B5.1 "Actions to Conserve Energy".

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: 5/31/11

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