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Electric Administration Division
502 Carroll Ave., P O. Box 811
Ames, Iowa 50010-0811
Phone: 515-239-5173
Fax: 515-239-5308

April 24, 2009

Mr. Douglas A. Campbell, Supervisor
Iowa DNR – Air Quality Bureau
7900 Hickman Road, Suite 1
Urbandale, Iowa 50322

In Re: CAIR Compliance Supplement Pool NO_x Allocation Application

Dear Mr. Campbell,

Pursuant to 40 CFR 96.143 and Iowa Code Chapter 34 205.3, the City of Ames (COA) is hereby making application for NO_x Allowances from the State of Iowa's Compliance Supplementary Pool (CSP)

The COA Power Plant, Units 7 & 8 both meet the early reduction requirements set forth by the Iowa DNR letter, "CAIR Compliance Supplement Pool Update and Example Calculations" dated March 26, 2009

The following statements are true of both units included in this application:

- The CAIR NOx unit must have undergone a qualifying NO_x emissions reduction project.
- The CAIR NOx unit must have **two years** worth of emissions data **prior** to the NO_x emissions reduction project to develop a baseline emissions rate.
- The CAIR NOx unit must have operated in the qualifying years of 2007 or 2008.
- The CAIR NOx unit must have achieved a reduction from the baseline emission rate in the qualifying years of 2007 **or** 2008.

CSP COA Power Plant Unit 7 Calculation

The COA Power Plant completed a NO_x emissions reduction project on Unit 7 in 2003. The scope of this project was to adopt boiler firing practices that were favorable for NO_x reduction and complete extensive operating personnel training to maintain these firing parameters.

EIQ #: 92-0224
Emission Unit No : EU-2
Emission Point No : EP-2

COA is proposing to use 2001 and 2002 as the baseline emission years. This unit operated in both 2007 and 2008 and achieved emissions reductions in both years.

2001 NO_x annual emission rate = 0.364 lb/MMBtu
2002 NO_x annual emission rate = 0.350 lb/MMBtu

Two year baseline average = (0.364 lb/MMBtu + 0.350 lb/MMBtu)/2 = 0.357 lb/MMBtu

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2007 annual heat input = 740,491 MMBtu
2007 NO_x annual emission rate = 0.333 lb/MMBtu

2008 annual heat input = 3,062,843 MMBtu
2008 NO_x annual emission rate = 0.340 lb/MMBtu

Projected baseline emissions for 2007 and 2008
2007 projected NO_x emissions = (740,491 MMBtu/yr * 0.357 lb/MMBtu)/2000 lb/ton = 132.2 ton/yr
2008 projected NO_x emissions = (3,062,843 MMBtu/yr * 0.357 lb/MMBtu)/2000 lb/ton = 546 7 ton/yr

Actual annual emissions for 2007 and 2008
2007 NO_x emissions = (740,491 MMBtu/yr * 0.333 lb/MMBtu)/2000 lb/ton = 123 3 ton/yr
2008 NO_x emissions = (3,062,843 MMBtu/yr * 0.340 lb/MMBtu)/2000 lb/ton = 520.7 ton/yr

Emissions reductions resulting from the NO_x control project
2007 reduction = 132.2 ton – 123 3 ton = 8.9 ton
2008 reduction = 546.7 ton – 520.7 ton = 26.0 ton
Total reduction = 8.9 ton + 26.0 ton = 35 ton

CSP COA Power Plant Unit 8 Calculation

The COA Power Plant completed a NO_x emissions reduction project on Unit 8 in 2003. The scope of this project was to adopt boiler firing practices that were favorable for NO_x reduction and complete extensive operating personnel training to maintain these firing parameters.

EIQ #: 92-0224
Emission Unit No.: EU-1
Emission Point No.: EP-1

COA is proposing to use 2001 and 2002 as the baseline emission years. This unit operated in both 2007 and 2008 and achieved emissions reductions in both years

2001 NO_x annual emission rate = 0.447 lb/MMBtu
2002 NO_x annual emission rate = 0.419 lb/MMBtu

Two year baseline average = (0.447 lb/MMBtu + 0 419 lb/MMBtu)/2 = 0.433 lb/MMBtu

2007 annual heat input = 5,537,913 MMBtu
2007 NO_x annual emission rate = 0.386 lb/MMBtu

2008 annual heat input = 3,168,058 MMBtu
2008 NO_x annual emission rate = 0 377 lb/MMBtu

Projected baseline emissions for 2007 and 2008
2007 projected NO_x emissions = (5,537,913 MMBtu/yr * 0.433 lb/MMBtu)/2000 lb/ton = 1199.0 ton/yr
2008 projected NO_x emissions = (3,168,058 MMBtu/yr * 0 433 lb/MMBtu)/2000 lb/ton = 685.9 ton/yr

Actual annual emissions for 2007 and 2008
2007 NO_x emissions = (5,537,913 MMBtu/yr * 0.386 lb/MMBtu)/2000 lb/ton = 1068.8 ton/yr
2008 NO_x emissions = (3,168,058 MMBtu/yr * 0 377 lb/MMBtu)/2000 lb/ton = 597.2 ton/yr

Emissions reductions resulting from the NO_x control project
2007 reduction = 1199.0 ton – 1068 8 ton = 130.1 ton
2008 reduction = 685.9 ton – 597 2 ton = 88.7 ton
Total reduction = 130.1 ton + 88.7 ton = 219 ton

Based on these calculations, the City of Ames Power Plant is applying for an allocation of **254 tons** of NO_x allowances from the CSP

Respectfully submitted,

Brian Trower, Assistant Director
Electric Services Department