

Bowling Green, Ohio Steam Plant - Cogeneration

CAPACITY: 240 kpph

A University Steam Plant owns and operates three gas and fuel oil fired boilers at their powerhouse located in Bowling Green, Ohio. The steam plant combusts natural gas as a primary fuel and utilizes #2 fuel oil as a supplementary fuel to generate steam for heating and cooking at the University. The three 80,000 pound per hour units are designated Units #1, #2, and #3. The exhaust gases from each unit are continuously monitored for nitrogen oxides, carbon dioxide, and opacity.

Federal Regulations promulgated in the Clean Air Act Amendments of 1972 as New Source Performance Standards (40 CFR Part 60) are applicable to the three combustion units. These regulations specify emission limitations for particulate matter, sulfur dioxide, and nitrogen oxides. The regulations require installation, calibration, maintenance, and operation of continuous emission monitoring systems (CEMS) for documentation and reporting of operating data and emission rates. Monitoring, record keeping, and reporting of carbon dioxide, nitrogen oxides, and opacity are specified through 40 CFR Part 60 regulations.

DAS System: SmartCEMS® with Data eElements®

History of Project Development:

11/01/2001

QA Manual prepared for CEMS system.

04/01/2003

Quote issued for PEMS system.

11/01/2003

The alternative monitoring plan (AMP) was prepared and submitted

01/01/2005

Initial startup data of PEMS model recorded. PEMS serial numbers were assigned:

- Boiler 1: B112.V1.030105
- Boiler 2: B113.V1.030105
- Boiler 3: B114.V1.030105

03/06/2005 – 03/10/2005

Initial RATA certification was performed. Revised Serial number for Boilers issued: B112-10294.030806, B113-10294.030706, and B114-.10294.030606.

03/06/2006 – 03/08/2006

Second RATA test was conducted

2007 - 2013

Fourth RATA test was conducted. The relative accuracy (RA) for each boiler was less than 10%.

PRODUCTS:

