

## **AIR QUALITY PERMITTING**

### **Introduction**

The Arizona Department of Environmental Quality (ADEQ) establishes regulations governing emissions of pollutants into the ambient air. The State's program is based upon its compliance with the Federal Clean Air Act (CAA) which establishes the US Environmental Protection Agency's authority to set national air quality standards. In Arizona, parts of the State, such as, Maricopa County, are authorized to implement the air quality regulations and permitting functions.

In 1990, Congress implemented significant modifications to the Clean Air Act including the new operating permit requirements in Title V. The purpose of Title V was to consolidate all federal air quality requirements for a source in one permit document. Arizona State University (ASU) Tempe campus, is considered a source that requires a permit.

### **Applicable ASU Policy**

- ASU Environmental Health & Safety Management Policy

### **Applicable Regulations**

- 40 CFR Part 70 - State Operating Permit Programs
- Maricopa County Rules: 100, 130, 200, 220, 241, 270, 280, 310, 311, 320, 324, 331, 336, 342, 360

### **Summary of Requirements**

Maricopa County establishes a broad air quality permitting program that requires a permit or approval for all installations which may emit pollutants.

Specifically, ASU may not construct or modify any air emission sources without first obtaining a permit or approval. Air emission sources include, but are not limited to: fuel burning equipment (generators, boilers and turbines), emergency generators (greater than 50 horsepower), fuel burning equipment with greater than 300,000 btu/hour (dual-fuel boilers, duct burners), bulk gas storage tanks, surface coating operations (spray coating activities in paint booths), woodworking and wood coating operations, solvent cleaning operations and printing presses.

The following are also regulated: fugitive dust; emissions from leased or borrowed equipment, material containment (solvents or other volatile compounds, paints, acids, alkalis, pesticides and fertilizer) and odors.

**Operational Limitations** exist for the following permitted operations:

- **Emergency Generators**
  - Run time (hours)
  - MACT equipment
  - Fuel that contains no more than 0.05% Sulfur by weight
  - Nitrogen Oxides ("NOx") and Carbon Monoxide ("CO") emissions limits
- **Fuel Burning Equipment** (greater than 300,000 Btu/hour)
  - Use natural gas for all boilers, heaters and duct burners
  - NOx and CO emissions limits
- **Turbine**

- Use only pipeline quality natural gas
- **Gasoline Storage Tank**
  - VOC emissions controls
  - Tank quality and leak testing
  - Allowable fuel throughput gallons per month and per year
  - Control device parameters
- **Surface Coating Operations**
  - Daily, monthly and rolling 12-month emission limits
  - VOC, Hazardous Air Pollutants (“HAPs”), Particulate Matter (“PM”) limits
  - Material limitations (authorized materials to be used)
  - Control device parameters
- **Solvent Cleaning Operations**
  - Daily, monthly and rolling 12-month emission limits
  - VOC and HAPs limits
- **Woodworking/Wood Coating Operations**
  - Daily, monthly and rolling 12-month emission limits
  - VOCs, HAPs, PM, Total Suspended Particulates (“TSP”)
  - Material Limitations
  - Control device parameters
- **Campus Wide VOC Containment & Disposal Requirements**
  - Take reasonable measure to keep VOCs from evaporating into the atmosphere

The Maricopa County Rules may exempt the Insignificant Activities and Trivial Activities from permitting. Check with the EH&S Department to verify if any proposed activities are exempt from permitting.

ADEQ charges permit fees ranging from of \$150 to \$25,000 for permitting air emission sources and annual fees ranging from \$380 to \$3,300.

## Training

All individuals associated with the maintenance of fuel burning equipment are required to undergo training to assure proper operations.

All individuals associated with any surface coating equipment must be fully trained before operating the equipment. A training log must be kept to assure all permit conditions are met.

All individuals must be trained and certified in the removal and recycling of chlorofluorocarbons (see *CFC Appliance Recycling and Recovery Practices Fact Sheet*).

## Reporting

ASU must submit an annual air quality emission report by April 30 th that covers the preceding year. The report provides an estimated quantity of each air pollutant emitted from all permitted sources. The tabulation of the report requires the maintenance of fuel use records for each permitted source and the calculation of emissions based on USEPA published emission factors for different types of equipment and fuels. The report must summarize the activities and air pollution emissions from ASU.

- **Fuel Burning Equipment** – submit NO<sub>x</sub> and CO emissions report every 6 months
- **Boilers** – must submit quarterly reports, performance testing for NO<sub>x</sub> and CO
- **Turbine** – submit performance testing for NO<sub>x</sub> and CO

- **Woodworking/Wood Coating Operations** – maintain a current list of all coating related materials and VOC content; updated set of receipts/invoices for each coating related material, updated records of the monthly and annual maintenance check sheets
- **Solvent Cleaning Operations** – maintain annual usage records of cleaning solvents; including make-up solvents

## **Inspections**

**Gas Storage Tank** – weekly inspections of the fill pipe, vapor valve and spill containment

**Woodworking/Wood Coating Operations** – maintain a updated records of the monthly and annual maintenance inspections as required by the O & M Plan

## **Recordkeeping**

Records must be kept accurate as required by the permit and allow easy verification of compliance with the permit. All records must be maintained for 5-years that requires demonstration for each operated air pollution control device..

**Boilers** – maintain fuel records/receipts from the supplier, and amount of each fuel combusted each day

**Turbine** – Operations and Maintenance (O&M) Plan

**Gas Storage Tanks** – maintain records on the amount of gas received each month and maintain the following records for a minimum of 5 years: total amount of gasoline received each month and weekly inspection records

**Surface Coating Operations** – maintain a current list of VOC containing materials, daily records on material usage, technical sheets and Material Safety Data Sheets (MSDS) from the manufacturer

**Woodworking/Wood coating Operations** – maintain inspections requirements as defined by the O&M Plan

**Solvent Cleaning Operations** – maintain a current list of cleaning solvents, including make-up solvents, VOC content of each in pounds of VOC per gallons of material, written value of the total VOC vapor-pressure of each cleaning solvent, a manufacturer's technical data sheet and MSDS, monthly usage records and annual usage records

## **Written Program**

EH&S and departments associated with air emissions must adhere to the conditions contained in ASU's air quality permit.

Updated 11/21/06