

Handout – CAM Applicability Exercise

A 100 MMBtu/hr natural gas-fired fortune-cookie incinerator has an electrostatic precipitator with 95% control efficiency for PM10 emissions, a scrubber with 60% control efficiency for SOx emissions, and low-NOx burners. The facility has been issued a Title V permit, which is now due for renewal. CAM has not been determined for this incinerator previously, and you are tasked with determining if the incinerator is subject to these requirements.

The operating permit has the following conditions:

- Emissions from this furnace shall not exceed any of the following emissions limits: NOx: 2.1 lb/MMBtu, SOx: 0.06 lb/MMBtu, PM10: 0.02 lb/MMBtu, VOC: 0.3 lb/MMBtu, and CO: 2.22 lb/MMBtu. [District NSR Rule]
- This incinerator shall not operate for more than 23 hours per day, nor more than 4,500 hours per year. [District NSR Rule]

The Major Source thresholds for the air basin in which this facility is located are as follows:

Pollutant	ton/year
NOx	25
SOx	70
PM10	70
CO	100
VOC	25

Question 1 – Which pollutants would be subject to CAM based only on the control technology criteria?

Question 2 – Of the remaining pollutants subject to CAM from Question 1, which pollutants are subject to CAM based on uncontrolled mass emissions?

Question 3 – What operating parameters would we choose to show a “reasonable assurance of compliance” should we choose to monitor the following indicators (ESP Voltage already done for you)?

Indicator	ESP voltage	VEE
Indicator range	20k Volts – 50K Volts – corrective action, reporting	
Measurement location	ESP voltage feed	
QA/QC	Annual cal, maintenance per manufacturer	
Frequency	At least once / day	
Data Collection Device	Voltage meters	
Averaging time	hourly	
QIP Threshold	< 10 excursions/qtr	