**Section 215.481 Control of Reactors, Distillation Units, Crystallizers, Centrifuges and Vacuum Dryers**

a) The owner or operator shall control all reactors, distillation units, crystallizers, centrifuges and vacuum dryers that are used to manufacture pharmaceuticals with surface condensers or other air pollution control equipment listed in subsection (a)(2).

1) If a surface condenser is used, it shall be operated such that the condenser outlet gas temperature does not exceed:

A) 248.2 K (-13 F) when condensing volatile organic material of vapor pressure greater than 40.0 kPa (5.8 psi) at 294.3 K (70 F); or

B) 258.2 K (5 F) when condensing volatile organic material of vapor pressure greater than 20.0 kPa (2.9 psi) at 294.3 K (70 F); or

C) 273.2 K (32 F) when condensing volatile organic material of vapor pressure greater than 10.0 kPa (1.5 psi) at 294.3 K (70 F); or

D) 283.2 K (50 F) when condensing volatile organic material of vapor pressure greater than 7.0 kPa (1.0 psi) at 294.3 K (70 F); or

E) 298.2 K (77 F) when condensing volatile organic material of vapor pressure greater than 3.45 kPa (0.5 psi) at 294.3 K (70 F).

2) If a scrubber, carbon adsorber, thermal incinerator, catalytic incinerator or other air pollution control equipment other than a surface condenser is used, such equipment shall provide a reduction in the emissions of volatile organic material of 90 percent or more.

b) The owner or operator shall enclose all centrifuges used to manufacture pharmaceuticals and that have an exposed volatile organic liquid surface, where the volatile organic material in the volatile organic liquid has a vapor pressure of 3.45 kPa (0.5 psi) or more at 294.3 K (70 F), except as production, sampling, maintenance or inspection procedures require operator access.

(Source: Amended at 15 Ill. Reg. 8018, effective May 14, 1991)