

# MON Continuous PV Requirements

# What is a Group 1 Continuous PV?

- A continuous PV with a total resource effectiveness (TRE) index value  $<1.9$  at an existing source and  $<5.0$  at a new source is Group 1.
- All other continuous PVs are Group 2.

# How do You Determine the Group

- Designate each continuous PV as Group 1 or determine the TRE value as specified in §63.115(d) of the HON.
- §63.115(d) allows for engineering assessments for TRE input values, but for TRE values estimated to be between 1.9 and 5.0 for existing sources and 5.0 and 8.0 for new and reconstructed sources testing is required to determine the TRE equation inputs.

# How do You Determine the Group (Cont'd)

- If a continuous PV is combined with Group 1 batch PVs before a control or recovery device, the TRE need not be determined, since control of the combined stream is required.

# TRE Equations

- Set of equations (3 for non-halogenated PVs and 1 for halogenated).
- Use HAP concentration, stream flow rate and heating value and TOC emission rate to calculate TRE index. Use lowest of three calculated values for non-halogenated streams.

# What Requirements must a Group 1 Continuous PV Meet?

- Vent the PV through a closed vent system (CVS) to a flare; or
- Reduce emissions of total organic HAP by  $\geq 98$  wt. % or to an outlet concentration  $\leq 20$  ppmv as organic HAP or TOC by venting through a CVS to any combination of control devices (except a flare); or
- Use a recovery device to maintain the TRE above 1.9 for an existing source or above 5.0 for a new source.

# What Requirements must Group 1 Continuous PV Meet? (Cont'd)

- If you vent the PV through a CVS to any combination of control devices (except a flare) or recovery devices, you must meet the requirements of §63.982(c) of Part 63 Subpart SS.
- If you vent the PV through a CVS to a flare, you must meet the requirements of §63.982(b) of Part 63 Subpart SS.

# What Requirements must a Group 2 Continuous PV Meet?

- If you use a recovery device to maintain the TRE above a specified threshold, you must meet the requirements of §63.982(e) of Part 63 Subpart SS.
- Monitoring is required if the TRE after the recovery device is between 1.9 and 5.0 for existing sources or between 5.0 and 8.0 for new sources.

# What is Subpart SS

- §63.980-999 of Part 63 contains requirements for closed vent systems (CVS) and control and recovery devices (including for halogenated streams) that may be referenced from other rules.
- It is essentially identical to subpart G of the CAR (Part 65).
- Subpart SS includes equipment requirements, work practices, performance testing and monitoring, data handling, recordkeeping and reporting.

# What is Subpart SS

- The requirements are based on the HON rule, but include burden reduction, clarity and consistency improvements.
- CVS requirements will be reviewed in the equipment leak discussion.
- Control and recovery device requirements will be touched upon in many other presentations, but time does not permit a comprehensive review.

# What Alternate is Provided for Group 1 PVs?

- Alternate available for batch or continuous PVs.
- Route vent streams through a CVS to a combustion control device that reduces HAP emissions:
  - To an outlet TOC concentration of  $\leq 20$  ppmv.
  - To an outlet concentration of HF, HCl and Cl<sub>2</sub> of  $\leq 20$  ppmv, or, if you control halogenated streams from a combustion device using a scrubber, reduce the HF, HCl and Cl<sub>2</sub> by  $\geq 95$  wt. % in the scrubber.

# What Alternate is Provided for Group 1 PVs? (Cont'd)

- Use a noncombustion control device(s) to reduce HAP to an outlet total organic HAP concentration of  $\leq 50$  ppmv and an outlet concentration of HF, HCl and Cl<sub>2</sub> to  $\leq 50$  ppmv.
- Handle any Group 1 PV that are not controlled according to this alternative standard according to the normal requirements in Tables 1 through 3 of the MON.
- Monitor for compliance using CEMs.

# What is a Halogenated Continuous PV?

- Halogenated vent stream means a vent stream determined to have a mass emission rate of halogen atoms (F, Cl, Br) contained in organic compounds of  $\geq 0.45$  kilograms per hour.
- If you do not designate the PV as halogenated, you must determine if it is using §63.115(d)(2)(v) of the HON, which provides for use of process knowledge that no halogen is present, or use of an engineering assessment or measurement where halogen is present.

# What Requirements must a Halogenated Continuous PV Meet?

- Use a halogen reduction device (meeting §63.994 of Subpart SS) after the combustion device to reduce emissions of HF, HCl and Cl<sub>2</sub> by  $\geq 99$  wt %, or to  $< 0.45$  kg/hr, or to  $< 20$  ppmv.
- Use a halogen reduction device (meeting §63.115(d)(2)(v)) before the combustion device to reduce the halogen atom (F, Cl, Br) mass emission rate to  $< 0.45$  kg/hr or to a concentration of  $< 20$  ppmv.

# What Requirements must a Halogenated Continuous PV Meet? (Cont'd)

- In addition, per Table 3, any MCPU with uncontrolled HF, HCl and Cl<sub>2</sub> emissions from all process vents  $\geq 1,000$  lb/yr must reduce those emissions by  $>99$  wt. % or to an outlet concentration  $<20$  ppmv by venting through a CVS to any combination of control devices.