

MON Equipment Leak Requirements

What “Equipment” is Covered?

- Each pump, compressor, agitator, pressure relief device, sampling connection system, open ended valve or line, valve, connector, and instrumentation system in organic HAP service; and any control devices or systems used to comply with the equipment leak standard in the MON.
- “In organic HAP service” means the equipment either contains or contacts a fluid (liquid or gas) that is at least 5 wt.% total organic HAP.

What Requirements must Existing Sources Meet?

- For equipment that is in organic HAP service at an existing source MCPU with no continuous process vents:
 - Comply with part 63 subpart TT; or
 - Comply with part 63 subpart UU; or
 - Comply with part 65, subpart F.

What Requirements must Existing Sources Meet? (Cont'd)

- For equipment that is in organic HAP service at an existing source MGPU with at least one continuous process vent:
 - Comply with part 63 subpart UU; or
 - Comply with part 65, subpart F.

What Requirements must New Sources Meet?

- For equipment that is in organic HAP service at a new source MCPU:
 - Comply with part 63 subpart UU; or
 - Comply with part 65, subpart F.

What does Part 63 Subpart TT Require?

- Subpart TT is patterned on NSPS VV.
- It contains equipment and work practice requirements.
- It requires extensive identification of equipment subject to the rule and of equipment meeting special conditions.

What does Part 63 Subpart TT Require?

- Work practice requirements are based on monitoring by Method 21 or visual means.
- In most cases a leak is defined as 10,000 ppm.

What does Part 63 Subpart TT Require? (Cont'd)

- If a leak is found, you must make a first attempt at repair within 5 days and repair within 15 days. A repair is not complete until remonitored.
- Delay of repair is permitted in limited circumstances.

What does Part 63 Subpart TT Require? (Cont'd)

Equipment Requirements

- Compressors must be equipped with a seal system that meets specified criteria.
- There is an exception, if the seal operates at <500 ppm as demonstrated annually.

What does Part 63 Subpart TT Require? (Cont'd)

Equipment Requirements

- All (gas, light liquid and heavy liquid) sample connection systems must be closed purge, closed loop, or have a closed vent system.

What does Part 63 Subpart TT Require? (Cont'd)

Equipment Requirements

- Control devices must achieve 95% control.
- Control devices must meet the requirements in part 63 subpart SS (§63.982(a)(4)).

What does Part 63 Subpart TT Require? (Cont'd)

Work Practice Requirements

- Valves in gas or light liquid (LL) service must be monitored monthly (quarterly if < 250 valves at plant site) by Method 21.
- LL means a liquid with at least 20 wt% of the VOC in the liquid having a vapor pressure at $20\text{ }^{\circ}\text{C} \geq 0.0435$ psi.

What does Part 63 Subpart TT Require? (Cont'd)

Work Practice Requirements

- With good performance (<2.0% leakers) can monitor annually, except for valves which have leaked.
- Can use historical data to reduce initial monitoring frequency.

What does Part 63 Subpart TT Require? (Cont'd)

Work Practice Requirements

- Pumps in LL and agitators in gas or LL service must be monitored monthly by Method 21 and visually checked weekly.
- Equipment alternates are allowed.

What does Part 63 Subpart TT Require? (Cont'd)

Work Practice Requirements

- Atmospheric relief devices in gas service must be monitored for <500 ppm leakage no later than 5 days after a release.

What does Part 63 Subpart TT Require? (Cont'd)

Work Practice Requirements

- Connectors, relief valves in LL service, instrumentation systems and equipment in HL service must be repaired, or monitored by Method 21, if a possible leak is identified by sensory means.

What does Part 63 Subpart TT Require? (Cont'd)

Work Practice Requirements

- Open-ended valves and lines are not permitted.
- Closed vent systems (CVS) must meet the requirements from part 63 subpart SS (§63.983).

What does Part 63 Subpart SS Require for a CVS?

- *Closed vent system* means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device. Closed vent system does not include the vapor collection system that is part of any tank truck or railcar.

What does Part 63 Subpart SS Require for a CVS? (Cont'd)

- Requires flow monitoring, car-sealing or lock and key for potential bypasses, with inspection.
- Pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines are not potential bypasses.

What does Part 63 Subpart SS Require for a CVS?

- For hard-pipe CVS, monitor components initially by Method 21 (500 ppm leak rate) and perform sensory inspection annually.
- For ductwork CVS, monitor components annually by Method 21 (500 ppm leak rate).

What does Part 63 Subpart UU Require?

- Part 65 Subpart F is the same as Part 63 Subpart UU.
- Subpart UU patterned on the HON.
- It has the same requirements as Subpart TT with the following major changes.

What does Part 63 Subpart UU Require? (Cont'd)

- For valves in gas or LL service the leak rate is 500 ppm.
- The % leak rate sets the monitoring frequency, except for leakers.
- A 2 year interval can be reached for 0.25% leak rates.

What does Part 63 Subpart UU Require? (Cont'd)

- Can use historical data to reduce initial monitoring frequency.
- Table 1 of subpart UU provides for reduced monitoring frequency for batch processes which operate less than 75% of the year.

What does Part 63 Subpart UU Require? (Cont'd)

- Valves can be subgrouped if entire MCPU is <2% leakers, with each subgroup having it's own monitoring interval, based on its performance.

What does Part 63 Subpart UU Require? (Cont'd)

- The leak rate for pumps is 1000 ppm (though repair is not required until 2000 ppm), with some special service pumps at higher definitions.

What does Part 63 Subpart UU Require? (Cont'd)

- Connectors in gas or LL service must be monitored by Method 21 with a 500 ppm leak rate definition in the first year and at intervals of 1 year to 8 years depending on leak rate.

What does Part 63 Subpart UU Require? (Cont'd)

- Quality improvement programs are required where pumps or valves exceed specified leak rates for extended times.

What does Part 63 Subpart UU Require? (Cont'd)

- §63.1036 of subpart UU provides for pressure/vacuum testing of batch processes as an alternate to Method 21 monitoring.
- Under §63.2480(c), this alternate is available to all MON processes, not just batch.

What does Part 63 Subpart UU Require? (Cont'd)

- Test all equipment at least annually.
- Test new or disturbed equipment each time it is reconfigured for production for a different product or intermediate. Routine seal breaks (hoses or filters) are exempt.

What does Part 63 Subpart UU Require? (Cont'd)

- An alternate for equipment in enclosures is also provided.
- Specific recordkeeping requirements apply to these batch alternates options.

What about other Equipment Leak Rules?

- If you have an affected source with equipment that is also subject to the requirements of part 60 subpart VV or part 61 subpart V, you may elect to apply the MON requirements to all such equipment.

What about other Equipment Leak Rules?

- If you have an affected source with no continuous process vents and equipment that is also subject to the requirements of part 60 subpart VV or part 61 subpart V, you may elect to comply with part 60 subpart VV or part 61 subpart V, as applicable, for all such equipment.