

## MON Heat Exchanger Requirements

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## What is a Heat Exchange System?

- *Heat exchange system* means any cooling tower system or once-through cooling water system (e.g., river or pond water). A heat exchange system can include more than one heat exchanger and can include an entire recirculating or once-through cooling system. [63.101]

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## What Heat Exchangers are Exempt?

- The heat exchange system operates with a minimum cooling water pressure at least 35 kPa (5.08 psi) greater than the maximum process side pressure.
- There is an intervening cooling fluid, containing <5 wt. % total HAP.

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## What Heat Exchangers are Exempt? (Cont'd)

- It's a once-through system that is subject to a NPDES permit meeting specified conditions.
- It's a once-through system used to cool fluids that contain <5 wt. % HON Table 9 HAP.
- It's a recirculating system used to cool fluids that contain <5 wt. % HON Table 4 HAP.

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## Heat Exchange System Requirements

- Comply with the requirements of §63.104 of the HON.
  - Monitor each heat exchange system used to cool process equipment in an MCPU using the procedures in §63.104(b) or (c).
  - Whenever a leak is detected, comply with the requirements in §63.104(d).

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## What are the Monitoring Requirements?

- Monitor monthly for six months then quarterly.
- Monitor individual heat exchangers or groups.
- Take triplicate samples and use EPA approved methods or monitor surrogates following a monitoring plan.

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## What is a leak?

- Using EPA methods:
  - A leak is detected if the exit mean concentration is greater than the entrance mean concentration using a one-sided statistical procedure at 0.05 level of significance and the amount by which it is greater is at least 1 ppm or 10% of the entrance mean, whichever is greater.

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## What is a leak?

- Using a surrogate:
  - The leak detection criteria is specified and justified in the monitoring plan.

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## Repair Provisions

- If a leak is detected, repair as soon as practical, but not later than 45 days after receiving the monitoring results.
- Remonitoring after repair is required.
- Delay of repair is allowed under certain, limited situations.

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