Level Currently Achievable and Permit Limit Derivation

Presentation to Willamette Basin Mercury MDV Advisory Committee
June 3, 2019
DEQ Headquarters, Portland, OR

Water Quality Standards and Assessment

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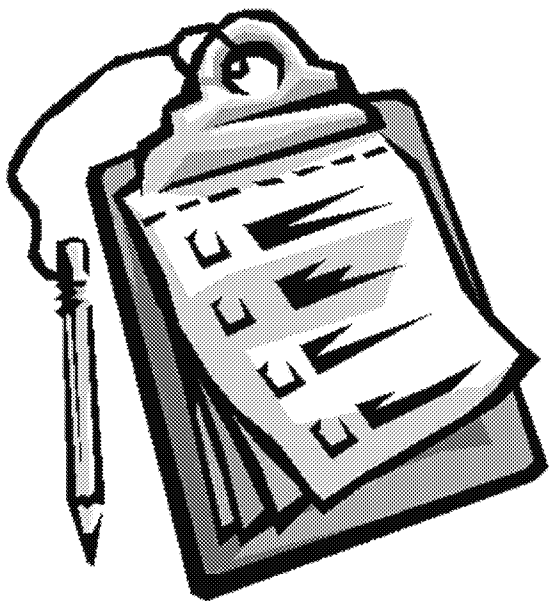
Topics

- Conceptual background
- How does the LCA differ from effluent limits?
- How will the LCA be calculated?
- How will DEQ derive permit limits from the LCA?



Context – what is the LCA?

- HAC 3: "The interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program."

Context – what the LCA is

- The effluent condition the facility can achieve when it is well operated
  - For Hg MDV, a method to calculate the mercury concentration (ng/L)
- Accounts for variability in influent concentrations
- Used to establish permit limit and to measure pollutant reduction over time
- Re-evaluated at least every 5 years

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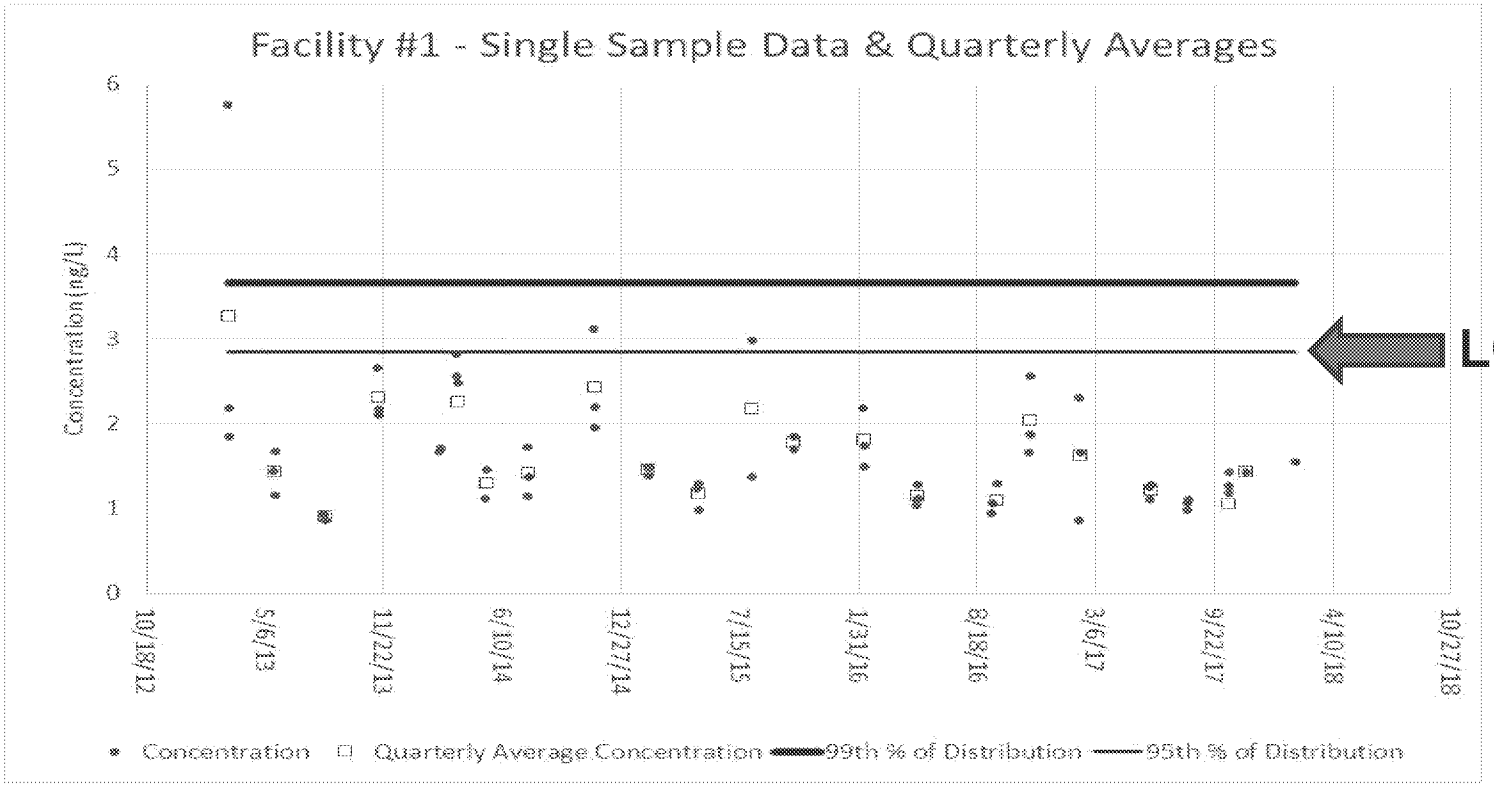
Context – what the LCA isn't

- The LCA itself is not a permit limit, but is the basis of a permit limit.
  - LCA methodology included in variance document.
  - Permit methodology included as appendix.

How will the LCA be calculated

- All data available for the most recent 5 years of mercury effluent data.
  - Minimum of two years of quarterly data, but more is better.
- Daily value treated as single data point, even if samples collected on consecutive days.
- Data log-transformed with no auto-correlation.
- TSD Methodology used to calculate 95th percentile of distribution.

How will the LCA be calculated



Proposal for LCA-based permit limits

- Quarterly-average effluent limits equal to LCA.
- Average multiple samples within same quarter, (incl. pre-treatment samples from different days.)
- Additional sampling allowed and must be included in quarterly average.

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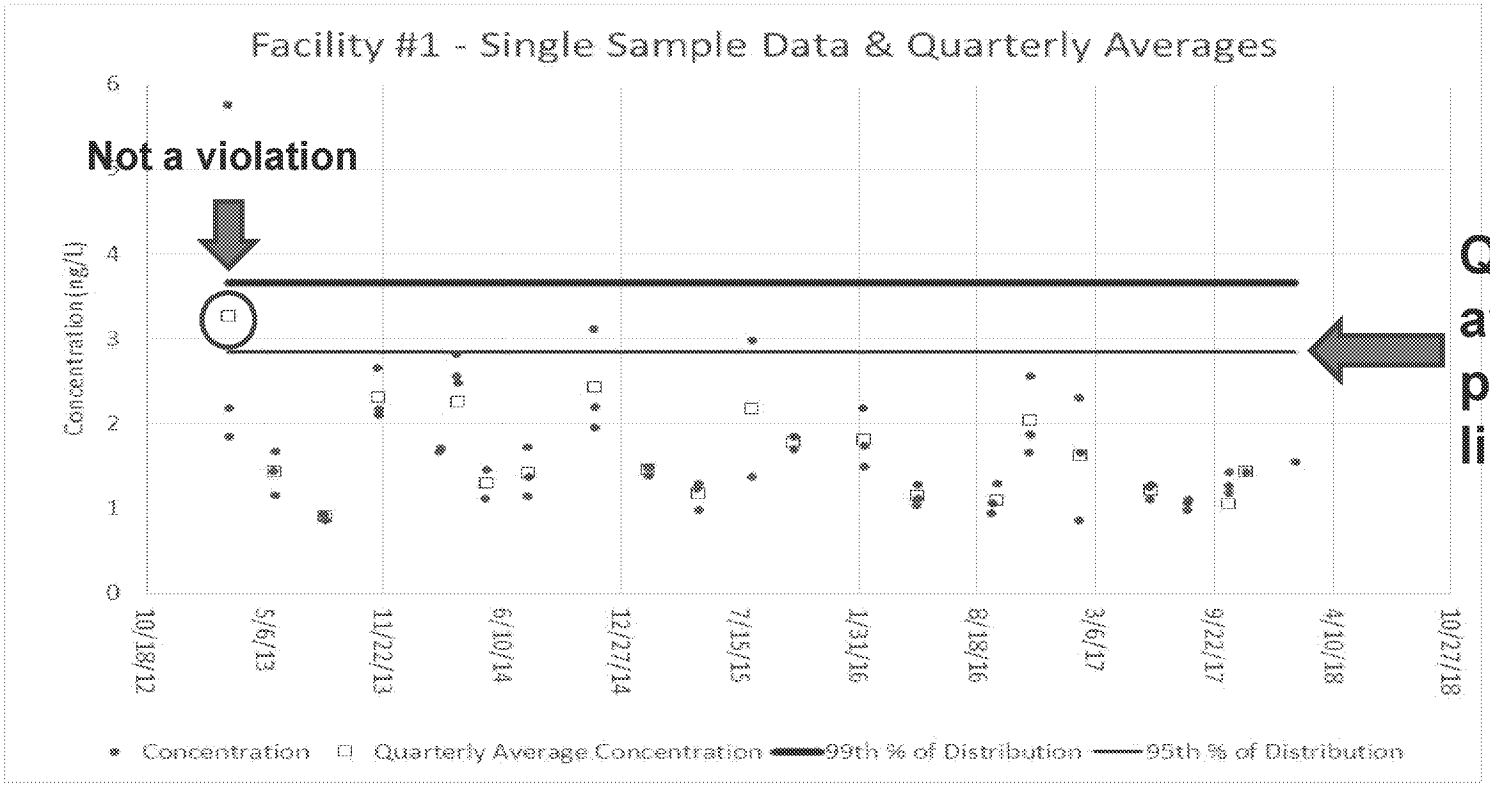
Proposal for LCA-based permit limits

- Violation if two consecutive quarters are above 95th percentile of distribution
  - Spike in concentrations can cause exceedance.
  - Does not indicate that facility isn't operating well.

LCA-based permit limits



Examination of data

- For 12 facilities, DEQ:
  - Used data to calculate LCA-based effluent limit
  - Compared quarterly average data to effluent limit
- 5 of 12 facilities exceeded 95th percentile quarterly average in one quarter.
- Only one facility exceeded 95th percentile in two consecutive quarters.

Re-evaluation of LCA and limit

- LCA (HAC) re-evaluated every five years
- During subsequent permit renewal, permit limit will be updated based on LCA re-evaluation.

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.