

LPDES Industrial Wastewater Discharge Permitting

Tips for a Successful Sampling & Analysis Program

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IND Instructions 05/07/2025

LAC 33:IX.2501.D.2 – submit new application at least 180 days prior to expiration date of existing permit

LDEQ may grant a time extension but no later than the expiration date of the current permit

If an application is not submitted before the existing permit expires, the existing permit may be terminated

Application Types

Initial Permit = New Facility

Initial Permit = Existing Facility

Modification = Existing Facility

Renewal = Existing Facility

Effluent Characteristics

- Primary Industry Category – Appendix A
- Table I: Conventional/Nonconventional
- Table II: Other Toxic Pollutants: Metals & Low Level Hg, CN, Phenols
- Table III: Toxic Pollutants: VOC's, BNA's, Pesticides, PCB's
- Table IV – Additional Conventional/Nonconventional
- Table V- Toxic Pollutants/Hazardous Substances
- Table VI – Dioxins
- Table VII – Other
- Tables II-VII as If Believed Present or Absent



Sampling

- Grabs = pH, Temperature, Cyanide, Total Phenols, Residual Chlorine, Oil & Grease & Fecal Coliform
- For all other tests, a 24 Hour Composite sample **must** be used
- However, intermittent discharges or holding ponds/impoundments with retention > 24 hours are allowed to be sampled as a Single Grab



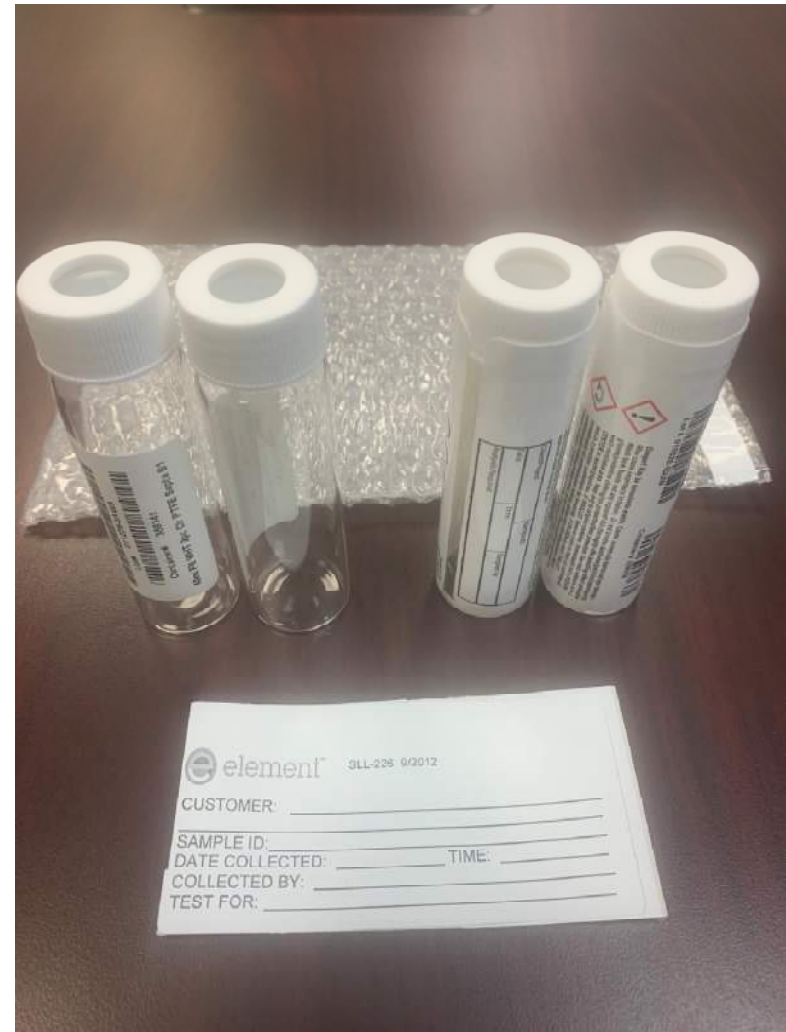
24 Hour Composites

- In general, for continuous discharges, collected as a minimum of 12 aliquots, at equal time intervals and combined proportionate to flow
- LDEQ may waive composite sampling if the applicant can demonstrate use of an autosampler is not feasible and that a minimum of 4 grabs will be representative of the discharge



24 Hour Composite for VOC's

- Collected as 4 Grabs, at 0, 8, 16 and 24 hours, then composited in the lab just prior to analysis
- Acrolein/Acrylonitrile collected unpreserved have a 3 Day Hold Time, 40 CFR 136.3 Table II, footnotes 5,10
- Unpreserved & HCL Preserved Vials



24 Hour Composite for VOC's – Continued

Collected via Zero Headspace

While Zero Headspace is the goal, headspace of ≤ 6 mm or 0.236" is acceptable



VOC's Compositing in Lab – 3 Options



From each of the 4 Grab sets, 1.25 ml is poured into a syringe for injection/purge

Chilled aliquots of equal amounts are poured into a flask chilled in a wet ice bath, stir gently with a clean glass rod, then pour into appropriate vials as Zero Headspace

Or, all 4 Grabs can be analyzed separately and arithmetically averaged

24 Hour Composite for Low Level Mercury

Most autosamplers have tubing
with a metal strainer on the intake
end

Clean Technique should be used
to collect samples for Low Level
Mercury

Suggest to collect as 4 Grabs (0,
8,16, 24 hrs) and Composite in the
LL Hg lab for 1 Analysis, Field
Blank should be included



Stormwater Discharge Sampling

Collect from discharge of rain event > 0.1 " and at least 72 hours from previously measured rain event

1st Flush Grab, for industrial facilities, must have data for the 1st Flush Grab taken during the 1st 30 minutes of the discharge or as soon as practicable

Testing For All Required Parameters

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Stormwater Discharge Sampling Continued

For all applicants, a flow-weighted composite shall be taken for the entire discharge or for the 1st 3 hours of the discharge

Taken as combination of a minimum of 3 aliquots, each a minimum of 15 minutes apart, for each hour of the entire discharge or for the 1st 3 hours of the discharge

Ponds/Impoundments with > 24 hour retention allows for Single Grab samples



Accreditations, Approved Methods & Minimum Quantification Levels (MQL's)

- LDEQ LELAP certification required for all analyses
- Sampling & Analysis must conform to LAC 33:IX Ch 25, LAC 33:IX.7107 and 40 CFR Part 136
- All analyses performed to required MQL's
- Acceptable calibration points as low as the MQL's or a check standard equal to the MQL and within 25% of its known value

Work With Your Lab

- Organized sample kits
- Detailed, pre-printed CoC's
- Grabs & Composites clearly marked
- VOC/LL Hg Grabs recorded on CoC and marked as "For Composite by Lab"
- Autosampler programmed for adequate sample volume
- Start early – Process Outfalls are easiest, Stormwater Outfalls require a qualified rain event
- Sample early in the week – to ensure sample holding times



REFERENCES

LAC 33:IX.2501

40 CFR Part 136

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Questions Are Welcome

*Merci Beaucoup for
Attending*

