

# How to Set Up Your LDAR Program for Permit-Ready Success

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# Outline

- Fugitive Emissions
- Monitoring Requirements
  - Federal
  - State
  - Consent Decree
- Permitting Applicability
  - Initial Applicability
  - Continued Compliance
- Conclusion
- Questions

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# Fugitive Emissions

- Fugitive emissions have “escaped” from process equipment (valves, pumps, piping components, etc)
- These are a regulated emissions source and may require:
  - Emissions Control
    - Typically via monitoring for and fixing leaks
      - Federal, state, and (occasionally) local monitoring requirements
    - Installation of low-leak components
      - Sealless pumps, certified low-leaking valves
  - Permitting
    - Title V, New Source Review, Texas PBRs, and other state permits
    - Depending on the control requirements of the site, potential permitted emissions can be reduced

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# Monitoring Requirements

Federal, State, and Consent Decree Requirements

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# Monitoring Requirements - Federal

- VOCs – NSPS VV, VVa, GGG, GGGa
- HAPs – HON/MON
- Hazardous Waste – RCRA BB
- Additional alphabet soup

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# Monitoring Requirements - Federal

## NSPS VV/VVa Requirements

Component	Valves		PRDs		Connectors	
Regulation	VV	VVa	VV	VVa	VV	VVa
Leak Definition (ppm)	10,000	500	500		10,000	
Monitoring Freq.	2 M, then Q		Within 5 days after release		AVO only	
Repair Deadlines	5/15/DOR		ASAP		5/15/DOR	
Exceptions	DTM, UTM, NDE, HL, etc.		Rupture Disks, routed to control/process, LL/HL		N/A	

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# Monitoring Requirements - Federal

## NSPS VV/VVa Requirements

Component	Pumps		Compressors		Agitators**	
Regulation	VV	VVa	VV	VVa	VV	VVa
Leak Definition (ppm)	10,000	2,000*	Equipped w/Barrier Fluid, or NDE		NA	
Monitoring Freq.	W Visual, M M21		NA		NA	
Repair Deadlines	5/15/DOR		5/15/DOR		NA	
Exceptions	DMS, NDE, UTM routed to control, HL		NA		NA	

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# Monitoring Requirements - State

- Selected states with additional monitoring requirements
  - Texas
    - NSR-Specific Requirements
    - County-Specific Requirements in areas of Texas
      - HRVOC rules in HGB area
  - Louisiana
    - MACT for Non-HON sources (LAC 33:III)
  - California
    - California Regional Air Districts

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# Monitoring Requirements – CD

- Consent Decrees have additional requirements
  - Increased monitoring frequency
  - Lower leak definitions
  - Low-leaking valve installation
  - Connector monitoring

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# Permitting Applicability

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# Permitting Applicability – Initial Applicability

- How is applicability determined?
  - Stream Contents
  - Physical State of Stream
  - Control Efficiencies
    - Based on monitoring frequencies

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# Permitting Applicability – Initial Applicability

- What is permitted, but not monitored under Method 21?
  - Heavy Liquid components
    - Applicable to permitting
    - Quantity determination
    - Monitoring applicability
  - State Regulations
    - Ex: components containing <10% VOC in Texas.
  - Review state-provided guidance for specific permitting rules and sections when determining permitting applicability
- Are there reasons to implement increased LDAR monitoring to reduce emissions?
  - Meeting non-attainment and PSD thresholds
  - Reducing modeling impacts

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# Permitting Applicability – Initial Applicability

- Database set-up
  - Defining rulesets
    - Avoid only one “worst-case” rule set
    - Recall that state and federal requirements may not be equivalent
    - Ensure monitoring beyond the requirements is included in the database
  - Ensure unit data is complete and accurate
    - Speciations are based on the process area
      - Engineering knowledge, testing, or material balance

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# Permitting Applicability – Continual Compliance and Review

- Permit Review
  - While the permit is being written
  - After permit issuance
- Periodically review the issued permit to ensure compliance with all clauses
  - Consider including a requirement to review issued permit within the LDAR written plan

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# Permitting Applicability – Continual Compliance and Review

- How often should permitting applicability be reviewed?
  - Exact accounting – more accurate emission estimates, but may require frequent updates
  - Contingency counts – allows for less frequent updates, but may result in overestimated emissions
- How are process changes captured?
  - Ensure a robust system of MOC & QA/QC is in place
    - Multiple levels of fugitive checks
    - Periodic updates to database rules
    - Review emission factors to ensure the permitted values are used

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# Conclusion

- Understand all permit credits for required and elected monitoring onsite
  - Component monitoring frequency per component type
  - Justifications for taking permit credits for monitoring
  - Each permit type may provide different credit qualifications

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# Questions?

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