

What Can the Consolidated Air Rule for SOCFI Do for You

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Part I

Background and Overview

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Blast from the Past

CAR History

- ▶ The Consolidated Federal Air Rule (CAR).
 - ❑ 40 CFR Part 65.
 - ❑ A pilot rulemaking originating from President Clinton's March 16, 1995 initiative to reinvent environmental regulations.
 - ❑ Published in the Federal Register on August 31, 1993, became effective December 14, 2000.
- ▶ Combines Federal SOCFMI.
 - ❑ Optional compliance alternative for SOCFMI sources

Why SOCFI?

- ▶ SOCFI Facility Usually Applicable to Several Air Programs W/Similar Air Regulations.
 - NSPS,
 - NESHAP, and
 - RCRA air standards.

CAR Only Focuses On CAA

What Rules Were Consolidated?

Not All Parts of Referencing Subparts Are Included in CAR!

40 CFR part 60, subparts:	NSPS for VOC
A	General provisions
Ka*	Petroleum liquids storage
Kb *	Volatile organic liquid storage
VV*	SOCMI equipment leaks
DDD*	Certain polymers and resins process vents
III*	SOCMI air oxidation process vents
NNN*	SOCMI distillation process vents
RRR*	SOCMI reactor process vents
40 CFR part 61, subparts:	NESHAP for individual HAP
A	General provisions
V*	Equipment leaks for benzene and vinyl chloride
Y*	Benzene storage
BB*	Benzene transfer
40 CFR part 63, subparts:	NESHAP for multiple HAP
A	General provisions
F	SOCMI applicability
G*	SOCMI storage, transfer, and process vents
H*	SOCMI equipment leaks
<i>* The CAR calls these rules "Referencing subparts." A referencing subpart is a subpart for which the SOCM I CAR is an alternative means of compliance.</i>	

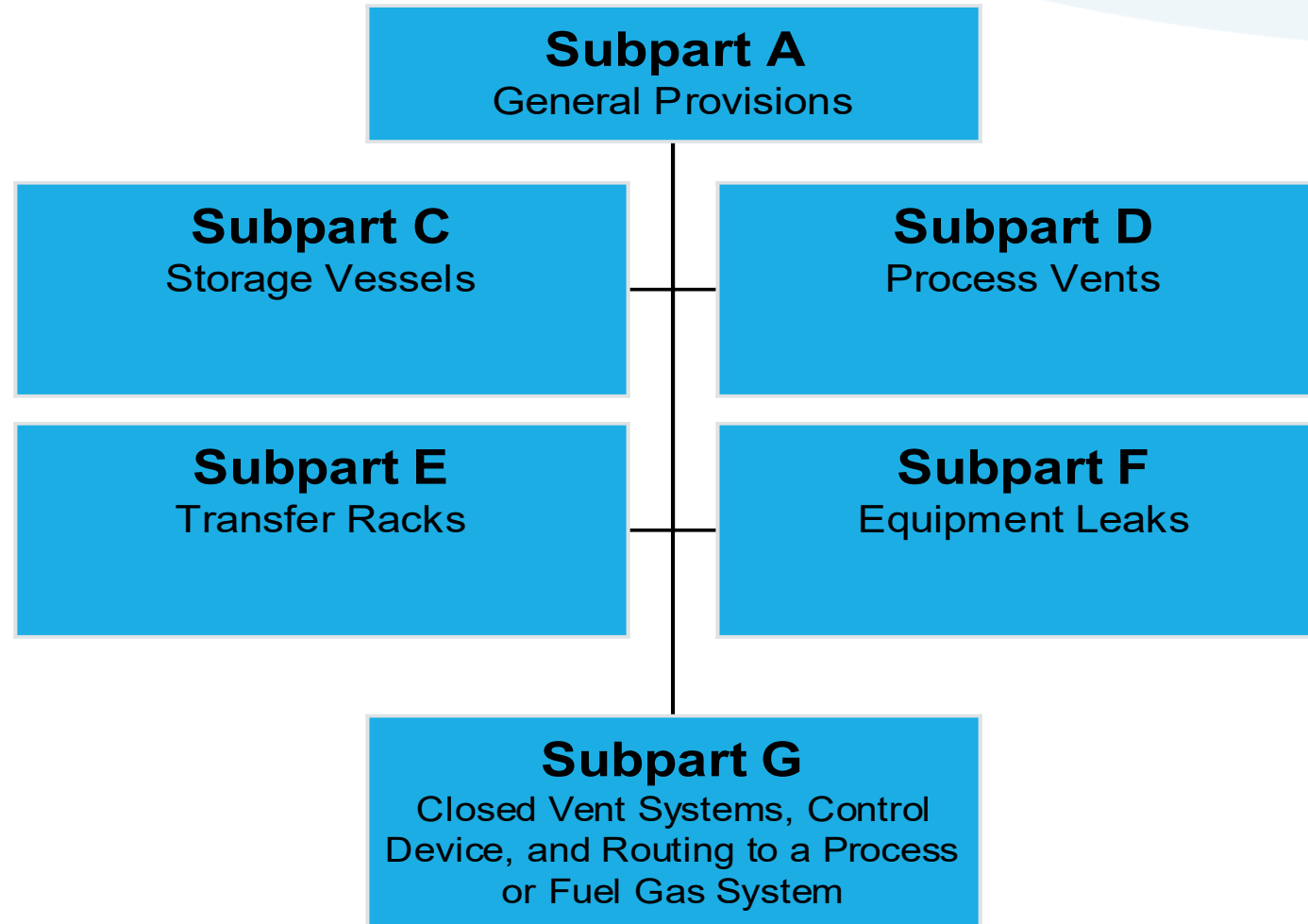
Today Using NSPS NNN and RRR In Examples?

40 CFR part 60, subparts:	NSPS for VOC
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Ka*	Petroleum liquids storage
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<p>* The CAR calls these rules "Referencing subparts." A referencing subpart is a subpart for which the SOCOMI CAR is an alternative means of compliance.</p>	

How Does Car Incorporation Work?

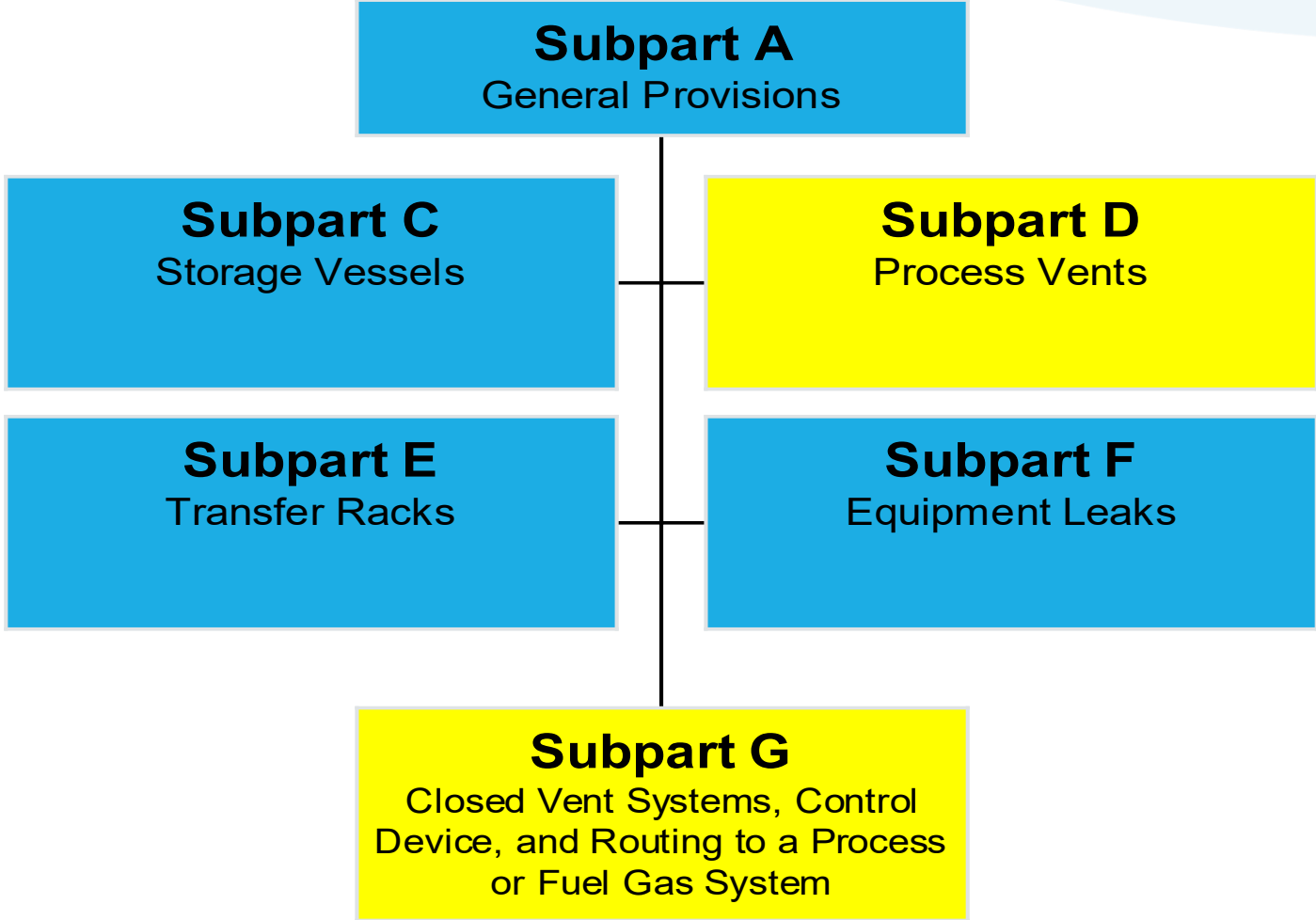
- ▶ A Facility Decides To Comply With CAR Instead Of Covered Referencing Subpart.
 - No need to include both citations for CAR and covered referencing subpart citations in permit.
 - Covered provisions of referencing subparts are contained in CAR citations.
 - Referencing subparts have been modify to include regulatory paths to CAR.
 - Reduces permit size and redundant wording.
 - Facility determines which modular CAR regulations are applicable.

What Are CAR's Modular Structure?



Similar Wording Between NNN & RRR

Using NSPS NNN & RRR What Modules Would Be Cited?



1st Example of Where NNN References CAR Subpart 65?

- ▶ 60.660(d)– Alternative Means of Compliance [Subpart NNN]
 - (1) *Option to comply with part 65*
 - *Owners or operators of process vents that are subject to [Subpart NNN] may choose to comply with the provisions of 40 CFR part 65, subpart D, to satisfy the requirements of **60.662 through 60.665 and 60.668 of [Subpart NNN]**.*
 - *The provisions of 40 CFR part 65 [CAR] also satisfy the criteria of paragraphs **(c)(4) and (6) of [Subpart NNN]**.*
 - *Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 [CAR] are provided in 40 CFR 65.1 [Applicability].*

This Is What Is Included in CAR

Subpart NNN Covered Citations Spelled Out

▶ NSPS NNN Provisions

- ❑ 60.660 – Exemptions,
 - 60.660 (c)4 – TRE <8 exemption.
 - 60.660 (c)6 – Flowrate <0.008 scm/min.
- ❑ 60.662 – Standards,
- ❑ 60.663 – Monitoring of emissions and operations,
- ❑ 60.664 – Test methods and procedures,
- ❑ 60.665 – Reporting and recordkeeping requirements, and
- ❑ 60.668 – Delegation of Authority.

Citations
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2nd Example of Where NNN Was Modified to Reference CAR Subpart 65?

▶ 60.660(d) [Subpart NNN]–Part 60, subpart A (2)

- Owners or operators who choose to comply with 40 CFR part 65, subpart D, must also comply **with 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 [NSPS A]** for those process vents.
- All sections and paragraphs of subpart A of this part [NSPS NNN] that are not mentioned in this paragraph (d)(2) do not apply to owners or operators of process vents complying with 40 CFR part 65, subpart D, **except that provisions required to be met prior to implementing 40 CFR part 65 still apply.**
- Owners and operators who choose to comply with **40 CFR part 65, subpart D, must comply with 40 CFR part 65, subpart A [General Provisions].**

Still
Have To
Do
These!

CAR Subpart A General Provisions Brief

Mainly Refer to Referencing Subpart General Conditions

So What Parts of NSPS Is Not Consolidate Under CAR?

▶ Some General NSPS Subpart A Provisions:

- ❑ 60.1 – Applicability (General terms of NSPS applicability),
- ❑ 60.2 – Definitions,
- ❑ 60.5 – Reporting requirements,
- ❑ 60.6 – Review of plan (Administrators right to review changes to NSPS compliance),
- ❑ 60.7(a)1 through (a)4 – Notification and recordkeeping,
- ❑ 60.14 – Modification defined,
- ❑ 60.15 – Reconstruction, and
- ❑ 60.16 – Priority list (major source categories listed).

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**Facility Has To Include In Permit
and Still Comply with Them!**

3rd and 4th Example of Where NNN References CAR Subpart 65?

▶ 60.660(d)– Alternative Means of Compliance [Subpart NNN]

□ (3) Compliance Date

- Owners or operators who **choose** to comply with 40 CFR part 65, subpart D, at **initial startup** shall
 - comply with paragraphs (d)(1) and (2) of this section for each vent stream on and after the date on which the initial performance
 - test is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be
 - operated, or 180 days after the initial startup, whichever date comes first.

□ (4) Initial startup notification

- Each owner or operator subject to the provisions of this subpart that chooses to comply with 40 CFR part 65, subpart D, at initial startup shall notify the Administrator of the specific provisions of 40 CFR 65.63(a)(1), (2), or (3), with which the owner or operator has elected to comply. Notification shall be submitted with the notifications of initial startup required by 40 CFR 65.5(b).

What Does *Choose* To Comply @ *Initial* Startup Allow

- ▶ Facilities Determine Compliance Schedule with CAR
 - ❑ Must be in compliance with CAR or referencing subpart at all times once applicability is determined.
 - ❑ Allows phase in of CAR.

Covered In Implementation of CAR

1st Example of Where RRR References CAR Subpart 65?

Similar Language
As NNN

- ▶ 60.700(d)(1) – Alternative Means of Compliance
 - ❑ *Owners or operators of process vents that are subject to [Subpart RRR] may choose to comply with the provisions of 40 CFR part 65 [CAR], subpart D, to satisfy the requirements of **60.702 through 60.705 and 60.708 [Subpart RRR]**.*
 - ❑ *The provisions of 40 CFR part 65 [CAR] also satisfy the criteria of paragraphs **(c)(2), (4), and (8) of [Subpart RRR]**.*
 - ❑ *Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.*

This Is What Is Included in CAR

Subpart RRR Covered Citations Spelled Out

Citations
from Previous
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▶ NSPS RRR Provisions

- ❑ 60.700 – Exemptions,
 - 60.700 (c)2 – TRE <8 exemption.
 - 60.700 (c)4 – Flowrate <0.011 scm/min exemption.
 - 60.700 (c)8 – TOC concentration in vent streams exemption.
 - <300 ppm Method 18.
 - <150 ppm Method 25A.
- ❑ 60.702 – Standards,
- ❑ 60.703 – Monitoring of emissions,
- ❑ 60.704 – Test methods and procedures,
- ❑ 60.705 – Reporting and recordkeeping requirements, and
- ❑ 60.708 – Delegation of Authority.

2nd Example of Where RRR Was Modified to Reference CAR Subpart 65?

Similar Language
As NNN

▶ 60.700(d) [Subpart RRR]– Part 60, Subpart A (2)

- Owners or operators who choose to comply with 40 CFR part 65, subpart D, must also comply **with 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 [NSPS A]** for those process vents.
- All sections and paragraphs of subpart A of this part [NSPS NNN] that are not mentioned in this paragraph (d)(2) do not apply to owners or operators of process vents complying with 40 CFR part 65, subpart D, **except that provisions required to be met prior to implementing 40 CFR part 65 still apply.**
- Owners and operators who choose to comply with **40 CFR part 65, subpart D, must comply with 40 CFR part 65, subpart A [General Provisions].**

Still
Have To
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CAR Subpart A General Provisions Brief

Mainly Reference Referencing Subpart General Conditions

So What Parts of NSPS Is Not Consolidate Under CAR?

▶ Some General NSPS Subpart A Provisions:

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- ❑ 60.6 – Review of plan (Administrators right to review changes to NSPS compliance),
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Same as NNN

**Facility Has To Include In Permit
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3rd and 4th Example of Where RRR References CAR Subpart 65?

▶ 60.700(d)– Alternative Means of Compliance [Subpart RRR]

□ (3) Compliance Date

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Similar Language
As NNN

Part II What Can CAR Do For You?

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Overall CAR Benefits – Big Picture

- ▶ Burden Reduction To A Typical Facility.
- ▶ Clearer Text And A Single Set Of Consistent Requirements.
 - Easier to Understand Requirements/Leading To Fewer Varying Interpretations:
 - By Enforcement Personnel, and
 - By Regulated Entities.
- ▶ Combination Of All Semi-annual Reports Into A Single Semi-annual Report.
 - Exceedance Reports For Monitored Parameters Are Submitted Semiannually As Opposed To After Each Occurrence.

Storage Vessels/Seal Gap Inspections

CAR	Referencing subparts
<ul style="list-style-type: none">- Allows up to two extensions of 30 days each to empty a vessel, remove it from service and repair it or perform seal gap measurements- Does not require prior approval for the extensions<ul style="list-style-type: none">- the owner or operator is required to document the basis for the extension and retain records of repairs and- report them in the next periodic report	<ul style="list-style-type: none">- Allow one extension of 30 days to empty a vessel and remove it from service if it cannot be repaired within 45 days- No provisions for extension to inspection when unsafe conditions exist
<ul style="list-style-type: none">- Only requires a record that an inspection has been performed on a specific vessel, the date of the inspection, and a reference to the type of inspection performed<ul style="list-style-type: none">- requires a description of a component's condition, but only if a problem is detected	<ul style="list-style-type: none">- Subpart Kb requires records of the condition of each component inspected

Storage Vessels/Post-Refill Seal Inspections/Control Device Downtime

CAR	Referencing subparts
For tanks being re-filled after having been out of service for more than one year	
<ul style="list-style-type: none">– allows 90 days for the seal gap measurements,<ul style="list-style-type: none">– as do the HON and subpart Y	<ul style="list-style-type: none">– Subparts Ka and Kb require seal gap measurements to be performed within 60 days of refilling
For tanks with control devices, planned downtime allowances	
<ul style="list-style-type: none">– 240 hours	<ul style="list-style-type: none">– Downtime allowances vary from no allowance, to 72 hours per year, to 240 hours per year

Storage Vessels/Floating Roof Landings

CAR

- Clarifies the ambiguity surrounding the procedures for filling, refilling, and emptying of storage vessels.
- The CAR clearly states that **when the liquid level drops below the roof supports during normal operation, the event is not considered emptying.**
- To minimize emissions when the roof is resting on its supports, the **CAR requires the process of refilling to be continuous.**

Referencing subparts

- **Require a storage vessel to be filled, emptied, or refilled as soon as possible and in a continuous manner once the roof is resting on its supports.**
- This requirement has been interpreted by some to mean that the liquid level in a vessel can be dropped below the level of the roof supports **ONLY when the vessel is being completely emptied.**

Process Vents/Vent Group Status

CAR	Referencing subparts
<ul style="list-style-type: none">- CAR clarifies and standardizes the nomenclature used to refer to vent classification.- The CAR establishes three "group" classifications for process vents.<ul style="list-style-type: none">- "Group 1" process vents must be controlled and monitored,- "Group 2A" process vents do not have to be controlled but must be monitored, and- "Group 2B" process vents do not have to be controlled or monitored.	<ul style="list-style-type: none">- NSPS: contain long text descriptions that repeatedly cite TRE index value, concentration, and flow rate every time the language refers to a vent classification.- HON uses the simpler designations "Group 1" and "Group 2" to distinguish process vents that require control from those that do not.- HON also uses long descriptions repeatedly to distinguish Group 2 process vents where monitoring is required from Group 2 process vents where monitoring is not required.

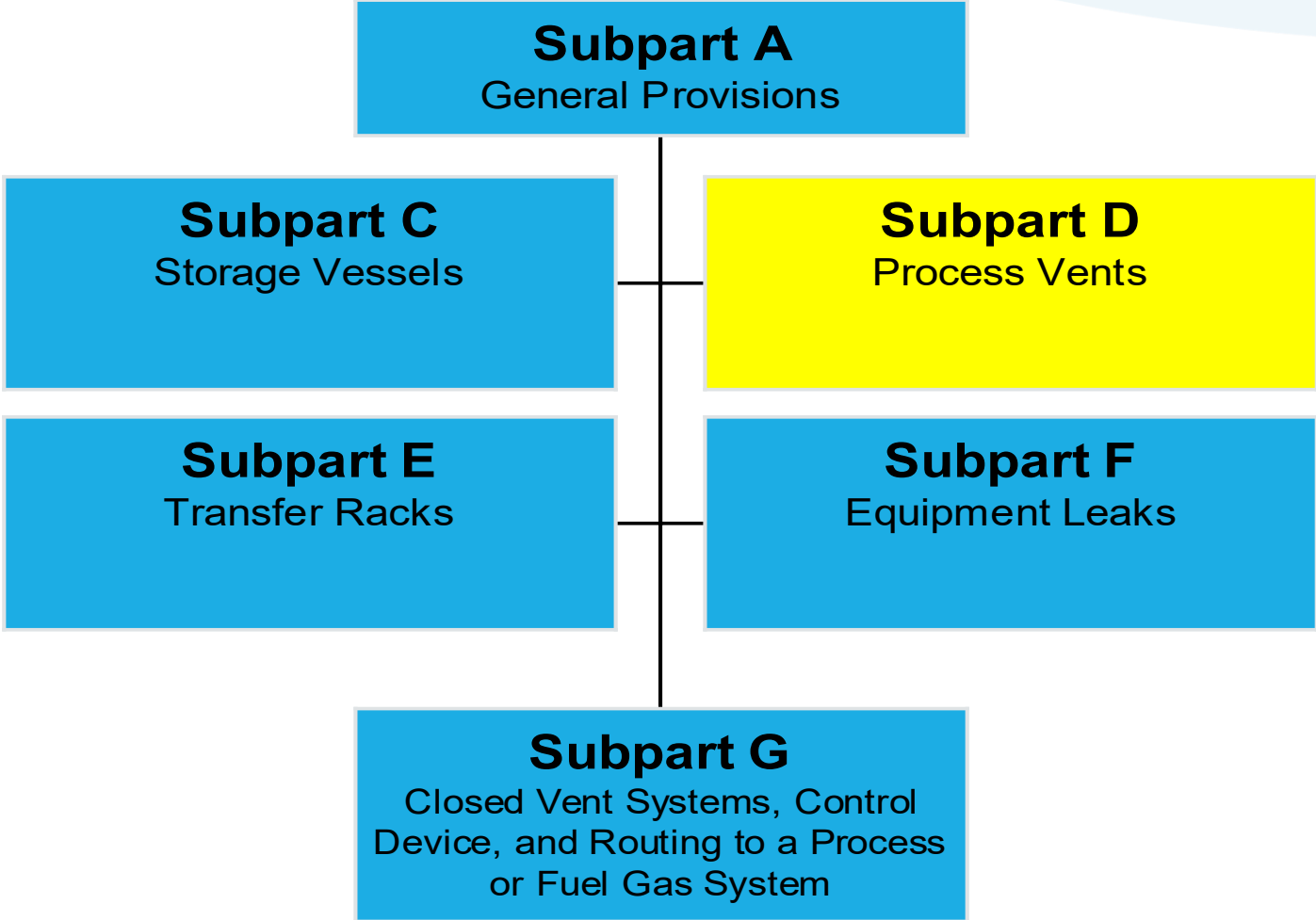
Process Vents/Vent Group Status Determination

CAR	Referencing subparts
<ul style="list-style-type: none">- Sampling site should be located after the last recovery device but prior to the control device inlet and prior to atmospheric release.- No back-calculation is necessary.<ul style="list-style-type: none">- The efficiency of the control device when reducing emissions from mixed streams is a good indication of the efficiency of the control device to reduce emissions from individual streams.	<ul style="list-style-type: none">- NSPS provisions required a back-calculation of the effects of the control device on the individual streams that are mixed prior to venting to a control device.<ul style="list-style-type: none">- Individual streams must be sampled.
<ul style="list-style-type: none">- Allows engineering assessment in lieu of testing to determine vent stream characteristics.- Engineering assessment is allowed when determining vent stream flow rate and concentrations, TRE index value for verifying Group 2B status, and halogenated vent stream status.	<ul style="list-style-type: none">- NSPS only allow engineering judgement for TRE index value determination after a process change is made, but not for initial determination of vent characteristics.- HON does not allow use of engineering judgement for the initial determination of concentration and flow rate to verify Group 2B status.

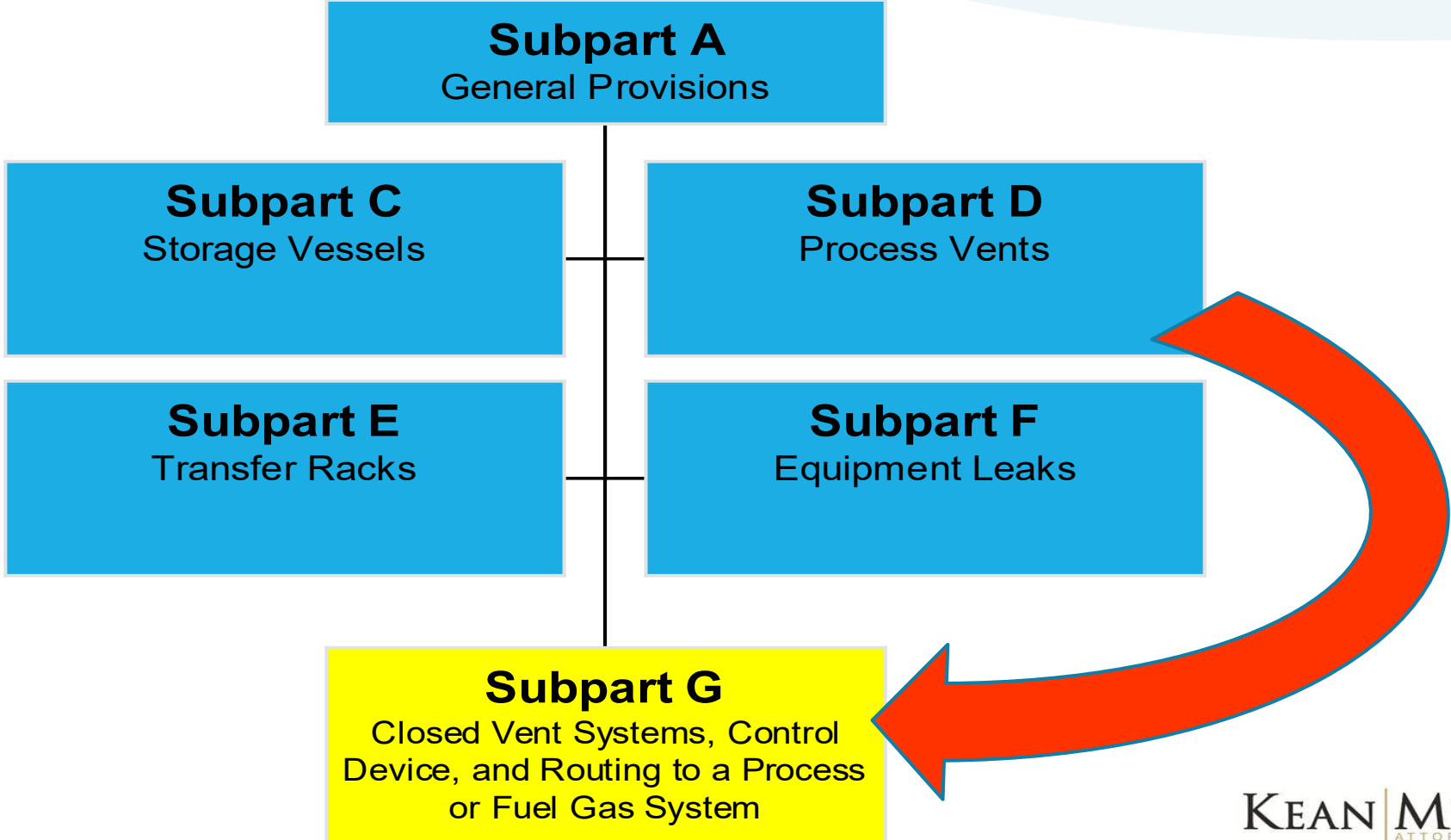
Process Vents/Process change reporting (with no upgrade to the group status)

CAR	Referencing subparts
<ul style="list-style-type: none">- Only requires a statement in the periodic report.- If a process vent that meets one criterion for Group 2B status undergoes a change and now meets another criterion for Group 2B status, no report is required.	<ul style="list-style-type: none">- Require test results, engineering assessments, etc.

CAR (Part 65) Structure



CAR (Part 65) Structure



CAR Subpart D - Process Vents

▶ CAR Simplified Language three "group" Process Vents Classifications:

- ❑ "Group 1" process vents must be controlled,
- ❑ "Group 2A" process vents do not have to be controlled but must be monitored,
- ❑ "Group 2B" process vents do not have to be controlled or monitored.
- ❑ By creating the classification of Group 2A and Group 2B process vents, the CAR eliminates several paragraphs of text each time a Group 2 vent is referenced.

Control Devices

CAR	Referencing subparts
<p>When Control Devices Need To Be Operated</p> <ul style="list-style-type: none">- States control devices be operated at all times when emissions are vented to them	<ul style="list-style-type: none">- States control devices be operated when emissions may be vented<ul style="list-style-type: none">- Implies continuous operation
<p>Monitoring provisions</p> <ul style="list-style-type: none">- Require establishment of a range for the monitored parameters (i.e., temperature) that indicates proper operation of the control device.- Can be based on<ul style="list-style-type: none">- prior performance test or- existing ranges or limits established under a referencing subpart- new performance test- engineering judgement	<ul style="list-style-type: none">- Specified operating limits instead of allowing control device specific ranges to be established.

Control Devices/Clarifies Requirements for Replacement

CAR	Referencing subparts
<ul style="list-style-type: none">- Requires notification prior to change.<ul style="list-style-type: none">- Can be done via Title V permit, alternative operating scenario (include in TV to provide flexibility), notice in a periodic report.	<ul style="list-style-type: none">- HON gives no specific guidance.- NSPS notice be made < 90 days prior to change.
Use of other control devices	
<ul style="list-style-type: none">- Requires a proposed monitoring plans submittal for approval	<ul style="list-style-type: none">- Dictates requirements

Other CAR Control Requirements Provide Flexibility

- ▶ CAR Allows 20 ppmv Outlet Concentration Alternative To 98% Weight Emissions Reduction.
 - ❑ Allowance for low concentration streams that are difficult to remove 98 weight-percent of the regulated material.
- ▶ No New Performance Testing Required If Tested Under Referencing Subpart.
- ▶ Alternative Monitoring and Continuous Parameter Monitoring Systems (CPMS) allowed.
 - ❑ Explicitly states CPMS are allowed; facilitates approval for AMP.
 - ❑ Allows both automated and non-automated but require data to be collected not less frequently than hourly.

CAR Subpart D – Process Vents

- ▶ A Subpart D Wrinkle Using a Product Recovery Device To Meet Group 2A/2B.
 - Allows Group 1 to use recovery device to maintain a TRE >1.0.
 - Example would be adding to the process a product recovery device such as condenser.
 - The TRE index value determination is made following the final product recovery device.
- ▶ Vent stream exiting the product recovery device meet the Group 2A or Group 2B requirements.

CAR Subpart G – Control Device

- ▶ Bypass Monitoring Done After the Control Device in CAR.
 - Referencing Subparts include flow monitoring provisions prior to the control device instead of after.
 - The CAR does not allow has to be after the control device.
 - May accommodate less monitoring systems to be able to combine more streams.
 - Sources currently using flow monitors would have to switch to bypass monitoring (permit modification).

Part III Case Studies

Successes and Lessons Learned?

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Case Study: Facility Specifics

▶ Main Products:

- ❑ Ethylene, Propylene, Butadiene, Benzene, Toluene, And Alkylate, Isopropyl Alcohol, Propylene Oxide, Butanediol, Styrene Monomer, Isobutylene, Methanol, Ethyl Tertiary-butyl Ether And Methyl, Tertiary-butyl Ether.

▶ Main Units:

- ❑ Olefins, Butadiene Polymers, Isopropyl Alcohol.

▶ Title V Renewal.

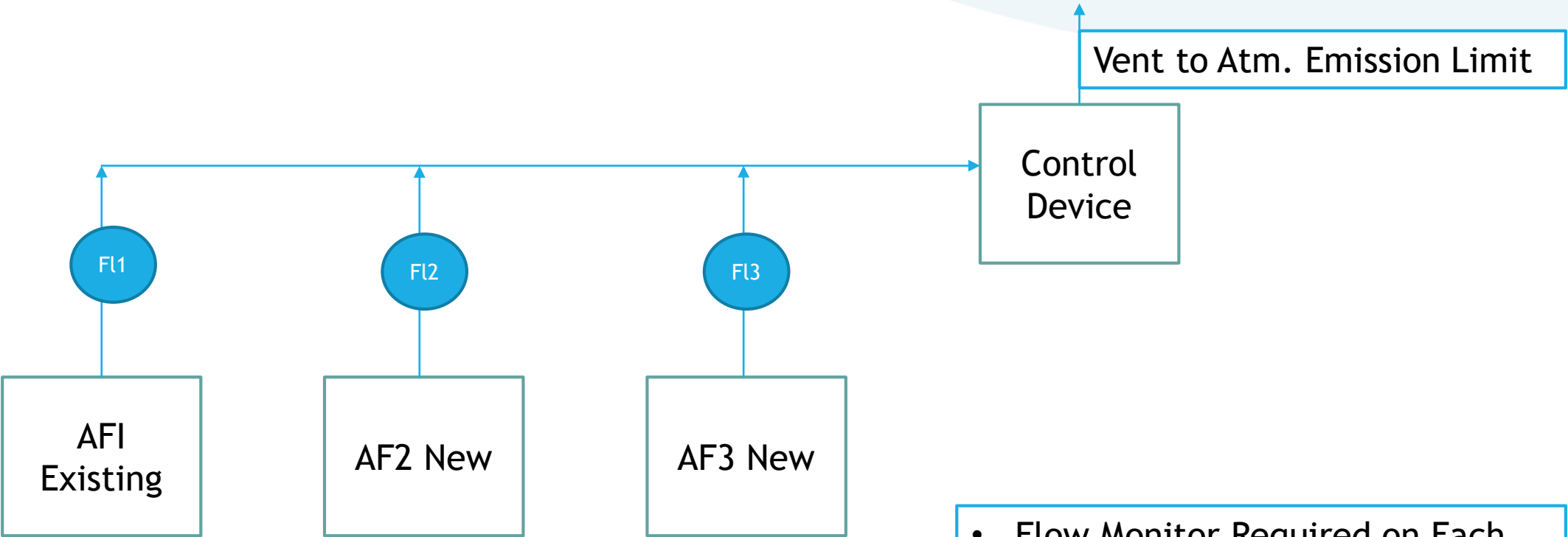
- ❑ Application submitted July of 2015.
- ❑ Permit issued November of 2016.

What Regulation Was Consolidated?

- ▶ NSPS **NNN** Bypass Lines Around Flares 60.663(b)(2) Requirements were consolidated.
- ▶ (b)(2) [NNN] states:
 - ❑ *A flow indicator that provides a record of vent stream flow to the flare at least once every hour for each affected facility. **AND***
 - ❑ *The flow indicator shall be installed in the vent stream from each affected facility at a point closest to the flare and before being joined with any other vent stream.*

This Would Have Required Multiple Flow Meters!

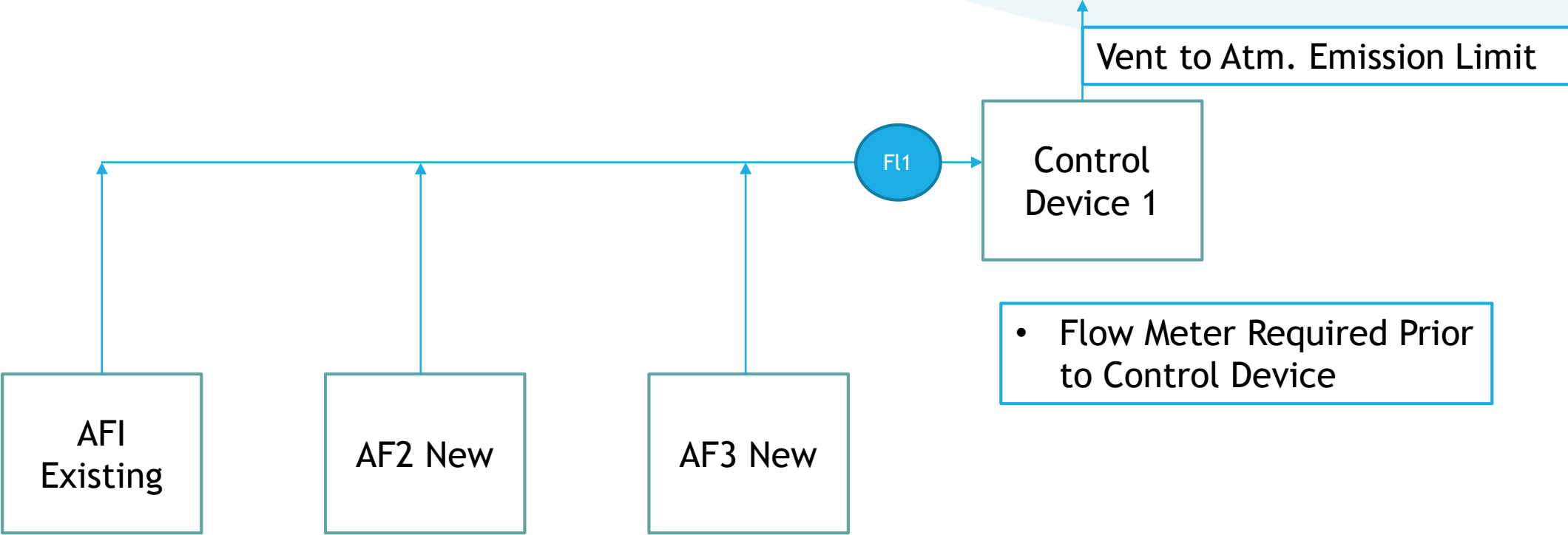
NNN Example Block Diagram



- Flow Monitor Required on Each Branch, prior to common header

AF - Affected Source
Fl - Flow Monitor

CAR Example Block Diagram



AF - Affected Source
Fl - Flow Monitor

Recommendations for Opting-in

Note – Recommendations Not Requirements!

► Preliminary Review.

- ❑ Determine emissions units eligible for CAR.
- ❑ Evaluate Pros and Cons of Implementing CAR.
 - Note as stated previously, a facility can implement CAR for individual, all, or no CAR eligible sources.
- ❑ Develop a preliminary “basis” document listing sources of CAR interest and brief details.
 - Basis or Table listing source, referencing subpart, CAR Subpart, proposed monitoring, recordkeeping, reporting and changes in control devices.

Recommendations for Opting-in

▶ Communicate with Regulatory Authority.

- Highly recommended at a minimum *before* you submit your permit modification.
 - Recommend scheduling a “preplanning” meeting with agency to discuss preliminary basis document.
 - This meeting will frame the more detailed basis document for opting into CAR.
- LDEQ and TCEQ have approved permits with CAR regulations.

Recommendations for Opting-in

▶ Agency First Meeting.

□ Discuss the agency's flexibility on:

- Changing scheduled reports,
- Preferred permitting process, renewal, minor modification, change or initial notifications of CAR,
- Implementation expectations on both sides,
 - Note that the facility must remain in compliance with referencing subpart or CAR at all times.
- Changing monitoring parameters
- Draft basis document and obtain feedback for agency.

Recommendations for Opting-in

- ▶ Develop a Final Basis Document– Some Suggested Elements:
 - ❑ Identify new or changed requirements for each effected emission unit and its sources,
 - ❑ Any new equipment that will be required,
 - ❑ Any new performance tests what will be required,
 - Don't forget new sources have initial notification requirements.
 - ❑ Any new monitoring devices or parameters, and
 - ❑ Any new SSM plan requirements.

Recommendations for Opting-in

- ▶ Develop Implementation Plan and Schedule Based on Final Basis Document.
 - ❑ Schedule can be completed in phases.
 - ❑ Facility can change implementation plan before, during of after permitting activity.
 - ❑ Recommend not jumping full force in.
 - Can do small sections of most regulatory burdensome sources.
- ▶ Present Detailed Implementation Plan to Agency and Obtain By In.
- ▶ Submit Permitting Activity Requirements.
 - ❑ Permit application.
- ▶ Submit Initial Compliance Status Report (ICSR) after CAR transition is complete.

A Shout Out to the AWMA for Allowing Us to Present and Provide This Forum Question Time!

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