

Greenhouse Gas Reporting Changes

Will you be Compliant?

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Subpart W Lead

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Introductions – Air Team



Vasco Roma – Novi, MI

Subpart W Lead

- 11 years of air quality experience
- Extensive GHG reporting rule and Subpart W experience



Eric Hodek – Austin, TX

National Oil and Gas Air Practice Lead

- 17 years of environmental compliance experience
- Extensive experience in federal and state air permitting and auditing



Kat Galloway – Austin, TX

Texas Oil and Gas Air Practice Lead

- 11 years of environmental compliance experience
- Extensive experience in air quality, permitting, monitoring, and modeling

Agenda

- Proposed Amendments
- Timeline and Action Items
- Best Available Monitoring Methods (BAMM)
- What you need to do
- Questions

The background of the slide is a photograph of an oil pumpjack (jack-o'-lantern) in silhouette against a bright orange and yellow sunset sky. The pumpjack is the central focus, with its long walking beam and counterweight visible. In the distance, other smaller pumpjacks can be seen on the horizon.

Subpart W

A teal-colored rounded rectangle is positioned to the left of the main title text.

Proposed Amendments

EPA's Proposed Amendments to **Subpart W**

1. New Onshore Petroleum and Natural Gas Gathering and Boosting Segment
2. New Oil Well Completion and Workover Source Type
3. New reporting requirement – Well ID Numbers
4. New Onshore Natural Gas Transmission Pipeline Segment

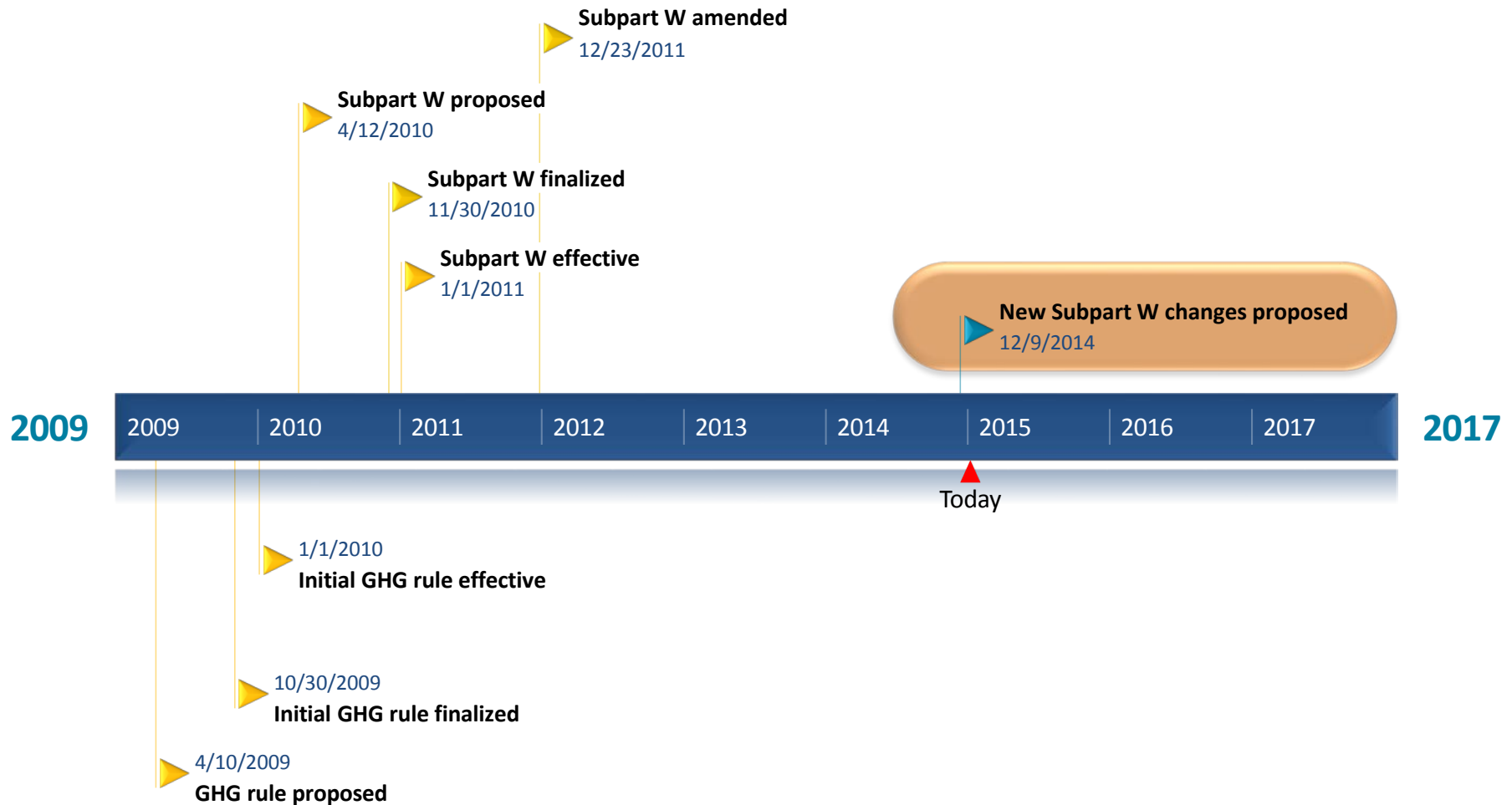
Subpart W

Proposed Amendment

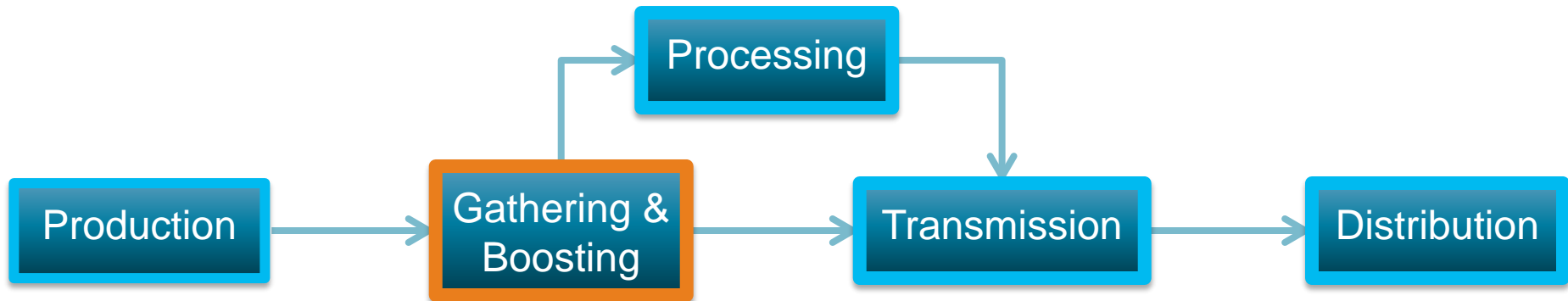
1.

**New Onshore Petroleum
and Natural Gas Gathering
and Boosting Segment**

Gathering and Boosting is Back



Gathering and Boosting is Back



- Subpart W segments currently include:
 - Onshore production
 - Onshore processing
 - Transmission compression
- Gathering and boosting proposed to be included but was left out when rule was finalized due to concerns raised by regulated community.

Definition of New Segment and Facility

- Gathering and boosting segment from end of production segment to start of processing, transmission, or distribution segments.
- Same basic approach to defining facility that EPA used for the production segment.
- Gathering and boosting segment would be looked at last when identifying segment for sites and equipment (first look at production, processing, transmission, and distribution).

Regulated Source Types

- Gathering pipeline equipment leaks
- Pneumatic pumps and devices
- Sweetening units
- Dehydrators
- Blowdowns
- Storage tanks
- Flares
- Centrifugal and reciprocating compressors
- Component leaks
- Gathering pipeline equipment leaks
- Stationary and portable fuel combustion units



Achieving Compliance

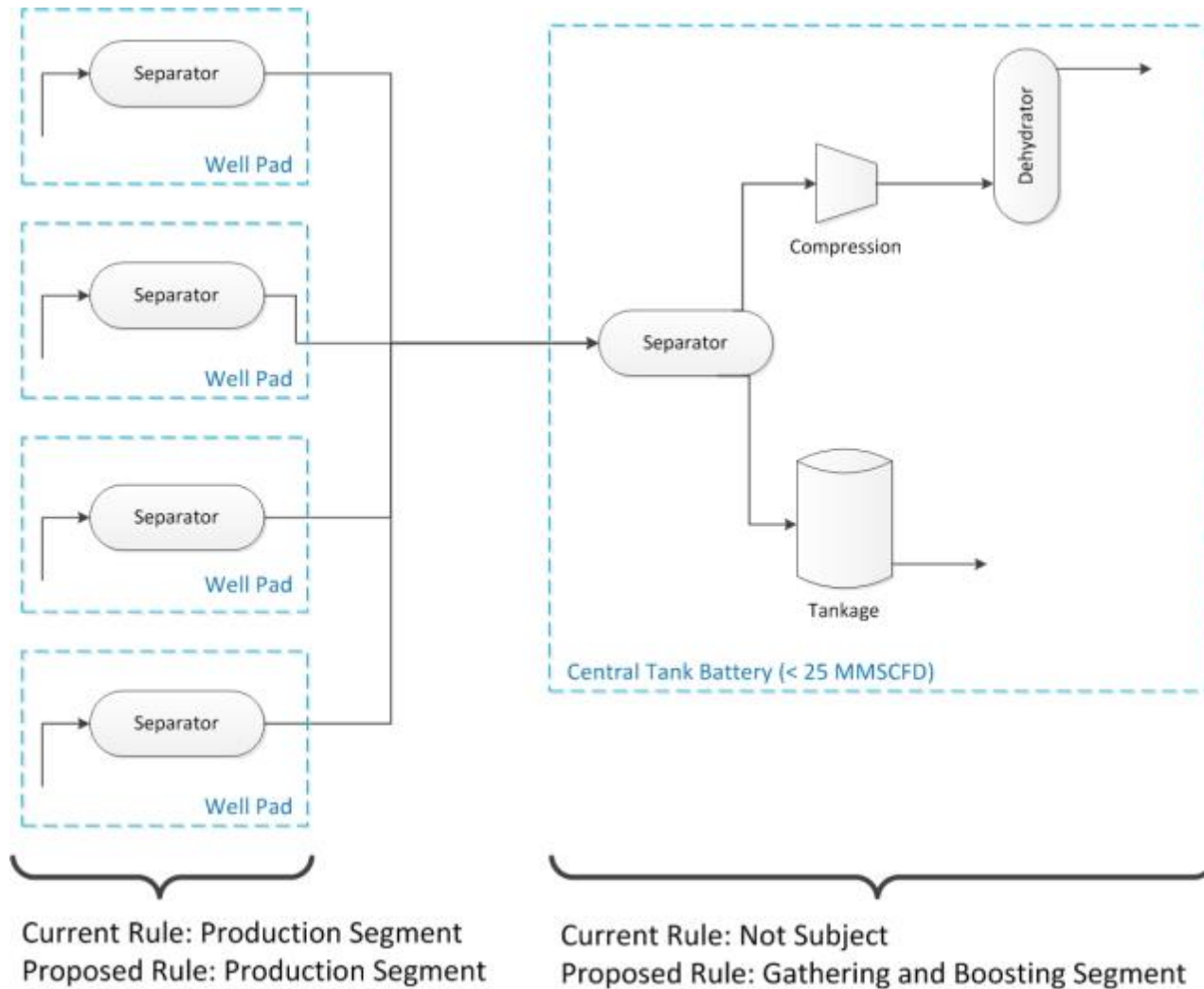
- I. Identify appropriate segment for sites and equipment
- II. Quantify emissions for each “facility” as defined for the respective segment
- III. Compare emissions from each facility to 25,000 MT CO₂e/year threshold
- IV. Report emissions for subject facilities

I. Identify appropriate segment for sites and equipment

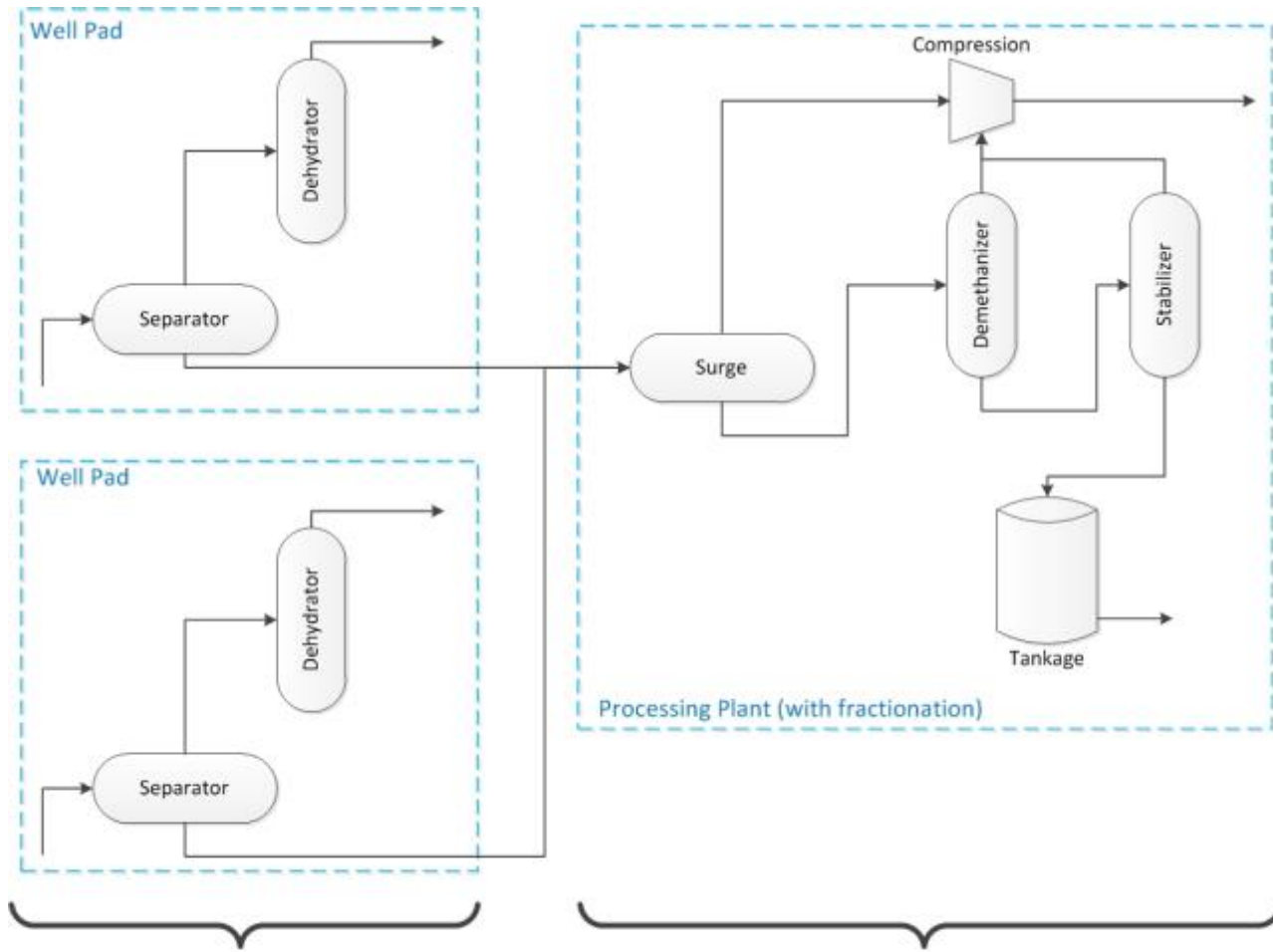
Look at applicability of the different segments in the following order:

- 1. Transmission & Distribution:** well-defined segments with little overlap with upstream segments
- 2. Processing:** fractionating plants or plants with throughput ≥ 25 MMSCFD
- 3. Production:** on a well-pad or associated with a single well-pad
- 4. Gathering and Boosting:** equipment and sites “between” production and processing/transmission/distribution

I. Identify appropriate segment for sites and equipment



I. Identify appropriate segment for sites and equipment



Current Rule: Production Segment
 Proposed Rule: Production Segment

Current Rule: Processing Segment
 Proposed Rule: Processing Segment

II. Quantify emissions for each “facility” as defined for the respective segment

- Group sources and equipment by “facility” (as defined in appropriate segment).
- Use rule methodologies to quantify actual GHG emissions for each “facility”.
 - Gathering and boosting segment uses current rule methodologies for existing source types in production segment.
 - Emissions from new gathering pipeline source type proposed to be estimated based on emission factors (not direct measurements) based on miles of lines.

III. Compare emissions from each facility to 25,000 MT CO₂e/year threshold

- Threshold continues to apply to all segments, including new Gathering and Boosting segment.
- Emissions are compared to threshold for separately for each segment/facility.

IV. Report emissions for subject facilities

- Facilities with actual emissions under threshold are exempt from reporting but may need to be reassessed on an annual basis.

Implications

Expanded rule coverage

- New segment attempts to capture previously unregulated sources. For example:
 - Compressor stations currently looked at individually under Subpart C could be aggregated by basin under the gathering and boosting segment of Subpart W.
 - Central facilities not part of production segment due to being associated with multiple well-pads now fall under new segment.

Implications

Applicability determinations have now become exponentially more complex.

- Requires detailed inventories and robust management of change systems.
 - Equipment on a well-pad/associated with a single well-pad?
 - Equipment part of fractionating plant or processing plant with throughput ≥ 25 MMSCFD?

Implications

Applicability determinations have now become exponentially more complex.

- New wells tied to facilities and well abandonments may impact segment applicability (production vs. gathering and boosting).
- Throughput changes may also impact segment applicability (processing vs. gathering and boosting).

Subpart W

Proposed Amendment

2.

**New Oil Well Completion
And Workover Source Type**

Current vs. Proposed

- EPA proposes to regulate oil well completions and workovers with hydraulic fracturing under production segment.
- Currently, only gas well completions and workovers are regulated as a stand alone source.
- Emissions from oil well completions and workovers are currently covered if gas sent to a regulated flare or if emissions occur during “well testing”.

Flowback Rate for Oil Wells

- Under current proposal, emission calculation methodologies can be based on direct flowback rate measurements for all oil wells or for representative oil wells.
- Unlike gas well source type, the current proposed amendments do not include a method for calculating flowback rate based on well parameters; only direct measurements are specified.

Flowback Rate for Oil Wells

- However, **EPA is seeking comments** on the availability of a method to estimate flowback for oil wells.

Subpart W

Proposed Amendment

3.

**New reporting requirement
– Well ID Numbers**

Well ID Numbers

- EPA would require that well identification numbers be included in annual reports for production segment for:
 - Wells associated with reported emission sources
 - Wells where direct measurements were taken
- For most wells, this will be the U.S. Well Number (formerly API Well Number).
- Alternatively, unique well number from well drilling permitting authority.

Well ID Numbers

- Would allow additional validation of reported data by EPA by comparing data reported under the GHG rule to data in other sources (e.g., state agencies).

Subpart W

Proposed Amendment

4.

**New Onshore Natural Gas
Transmission Pipeline
Segment**

What is Covered?

- Natural gas transmission pipeline blowdowns between compressor stations.
 - Currently, only transmission compressor stations themselves covered under rule.
- Emissions would be quantified using current rule methodologies for blowdowns.
- Reporting of fugitive pipeline emissions not proposed to be included.

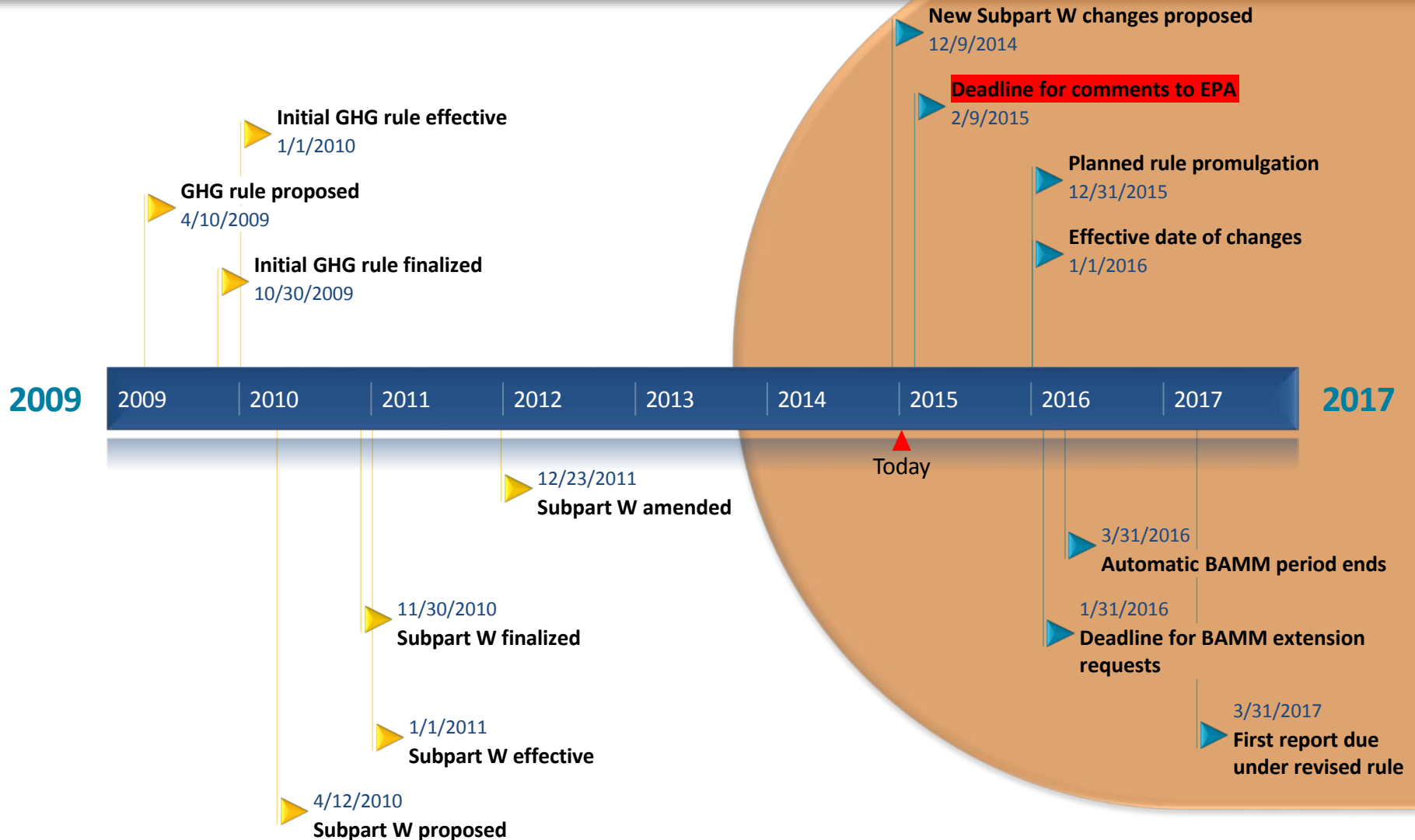
Implications

- “Facility” defined as total U.S. mileage of pipelines for each owner or operator.
- Nationwide emissions compared to 25,000 MT CO₂e threshold to determine applicability.
- Unless screening methodologies developed, tracking of all blowdowns required to determine annual emissions.

The background of the slide is a light-colored calendar grid with large, faint numbers. Two red pushpins are visible: one is in sharp focus on the left side, and another is blurred in the upper center. The main title is centered in a blue, sans-serif font.

Timeline and Action Items

Overall Timeline and Action Items



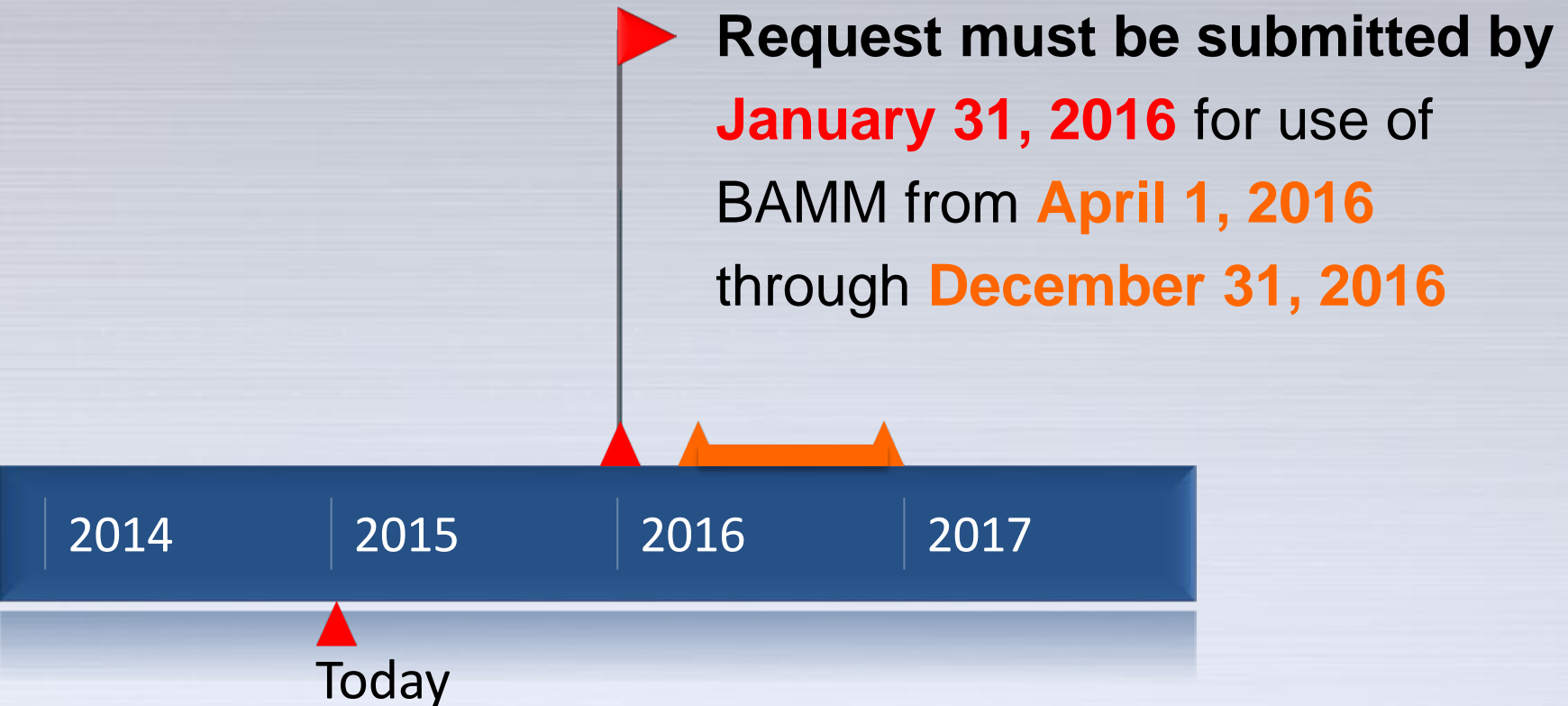


Best Available Monitoring Methods (BAMM)

BAMM Provisions

- EPA would allow the use of BAMM for 2016 reporting year for **new segments** or **new regulated source types**.
- Automatically granted for January 1 through March 31, 2016.

BAMM Provisions



EPA not proposing to allow BAMM beyond 2016

What **YOU** need to do



- Data collection begins **January 1, 2016**
- In the interim:
 - Equipment inventories
 - Applicability determinations
 - Monitoring evaluations
 - Gap assessment
- Implement monitoring program and address gaps
- Develop or update GHG Monitoring Plans
- BMM requests
- Emission calculations
- Reporting

Questions?



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Appendix



New Gathering and Boosting Segment

Definition of Segment

Gathering and boosting segment from end of production segment to start of processing, transmission, or distribution segments.

“[...] gathering pipelines and other equipment used to collect petroleum and/or natural gas from onshore production gas or oil wells and used to compress, dehydrate, sweeten, or transport the gas to a natural gas processing facility, a natural gas transmission pipeline or to a natural gas distribution pipeline. [...]”

[79 FR 73147, 12/9/2014]

New Gathering and Boosting Segment

Definition of Facility

- Same basic approach to defining facility that EPA used for the production segment.
- Gathering and boosting segment would be looked at last when identifying segment for sites and equipment (first look at production, processing, transmission, and distribution).

“Facility [...] means all gathering pipelines and other equipment located along those pipelines that are under common ownership or common control by a gathering and boosting system owner or operator and that are located in a single hydrocarbon basin as defined in this section. [...] The facility does not include equipment and pipelines that are part of any other industry segment defined in this subpart.”

[79 FR 73147, 12/9/2014]

New Gathering and Boosting Segment

Definition of Upstream and Downstream Segments

Production segment ends where equipment is not on a well-pad and handles production from more than one well-pad

“Associated with a single well-pad means associated with the hydrocarbon stream as produced from one or more wells located on that single well-pad. The association ends where the stream from a single well-pad is combined with streams from one or more additional single well-pads, where the point of combination is located off that single well-pad. Onshore production storage tanks on or associated with a single well-pad are considered a part of the onshore production facility.”

[40 CFR 98.238, 12/23/2011 amendments]

New Gathering and Boosting Segment

Definition of Upstream and Downstream Segments

- **Processing segment** covers plants that fractionate gas liquids and plants that do not fractionate but have annual average throughput ≥ 25 MMSCFD.
- **Transmission compression segment** includes compressor stations associated with transmission pipelines (FERC rate-regulated interstate, state rate-regulated intrastate, or “Hinshaw Exemption” pipelines).
- **Distribution segment** represents distribution pipelines and associated equipment operated by local distribution companies within each state.

