

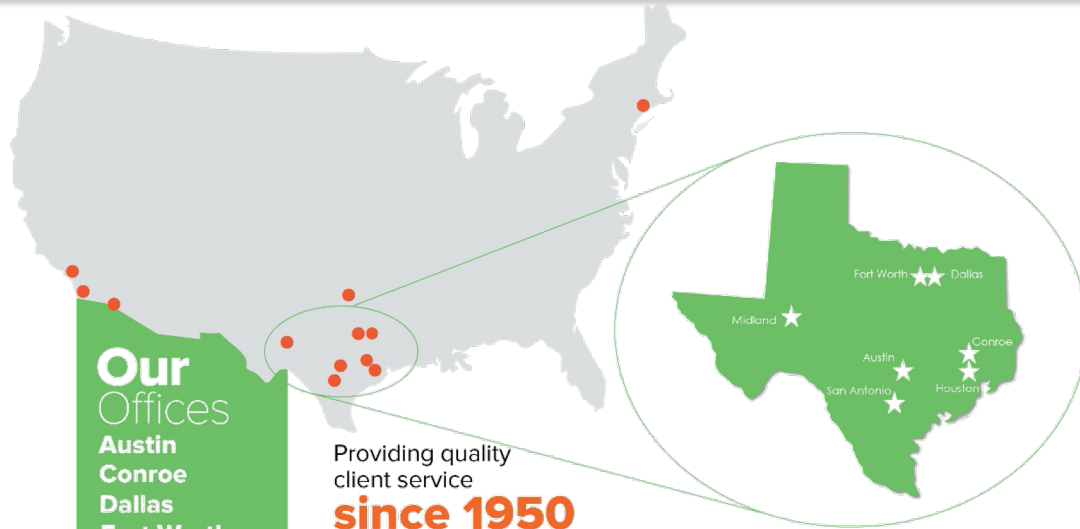
RNG WORKS



RNG Testing Protocols: QAP Perspective



Weaver at a Glance



**Our
Offices**
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Conroe
Dallas
Fort Worth
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Los Angeles
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New York City
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Providing quality
client service
since 1950

12 U.S.
locations

Largest independent
accounting firm based in the
Southwest



Services & Industries

Services

Assurance

- ▶ Agreed-upon procedures
- ▶ Audit, review & compilation
- ▶ Employee benefit plan audit
- ▶ IFRS assessment & conversion
- ▶ Peer review services
- ▶ SOC reporting services

Tax

- ▶ Federal tax
- ▶ International tax
- ▶ State & local tax
- ▶ Private client services

Advisory

- ▶ Energy compliance services
- ▶ Forensics & litigation services
- ▶ Public company services
- ▶ IT advisory services
- ▶ Risk advisory services
- ▶ Transaction advisory services

Industries

- ▶ Energy
- ▶ Financial services
- ▶ Manufacturing & distribution
- ▶ Construction
- ▶ Technology
- ▶ Real estate
- ▶ Public sector
- ▶ Health care

Introduction



Ashley Player, PE | Partner, Energy Compliance Services

- ▶ Weaver verifies 80-90% of D3 RINs generated each year
- ▶ Experience working with renewable CNG/LNG since the Renewable Fuel Standard Program began
- ▶ Primary Services:
 - Engineering Review/Registration
 - QAP Verification of RINs
 - EMTS Services
 - General Consulting
 - LCFS Validation/Verification

The image features two tall, dark, cylindrical industrial smokestacks or chimneys extending vertically from the bottom towards the top. They are set against a background of a bright, overcast sky filled with soft, white clouds. A solid green horizontal band is superimposed across the middle of the image, containing the title text in white. The smokestacks have a slightly textured appearance, possibly from rivets or panels.

EPA Biogas Quality Guidance

Biogas Quality Guidance



▶ September 2016

- EPA issued Biogas Quality Guidance
- Pending Biogas Registrations on Hold

▶ Addressed EPA Concerns:

- Purity of Biogas Incentivized
- Blending with Non-renewables
- Commercial Pipeline Specification Compliance
- QAP Verification of Biogas Quality

▶ Did NOT Establish “EPA Spec”

- Defers to Commercial Pipeline Spec for Project

Biogas Quality Guidance

► Certificates of Analysis

- Raw Biogas
- Upgraded Pure Biogas



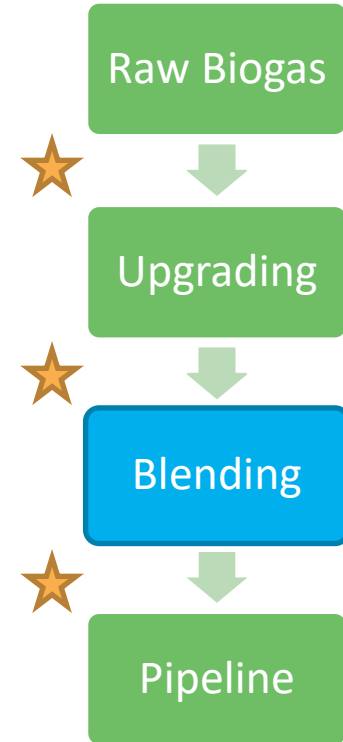
Biogas Quality Guidance

► Certificates of Analysis

- Raw Biogas
- Upgraded Pure Biogas
- AND Post-blending (if applicable)

► Blending May **ONLY** Correct

- Heat Content
- Inert Component Concentration



Biogas Quality Guidance

- ▶ Describe **HOW**
 - Treatment Technologies
 - Quality Monitoring Instruments
 - Provide Pipeline Specifications/Waivers
- ▶ **PROVE** Compliance
 - Third-Party Lab COAs
 - Summary Table of Results vs Pipeline Specs/Waivers



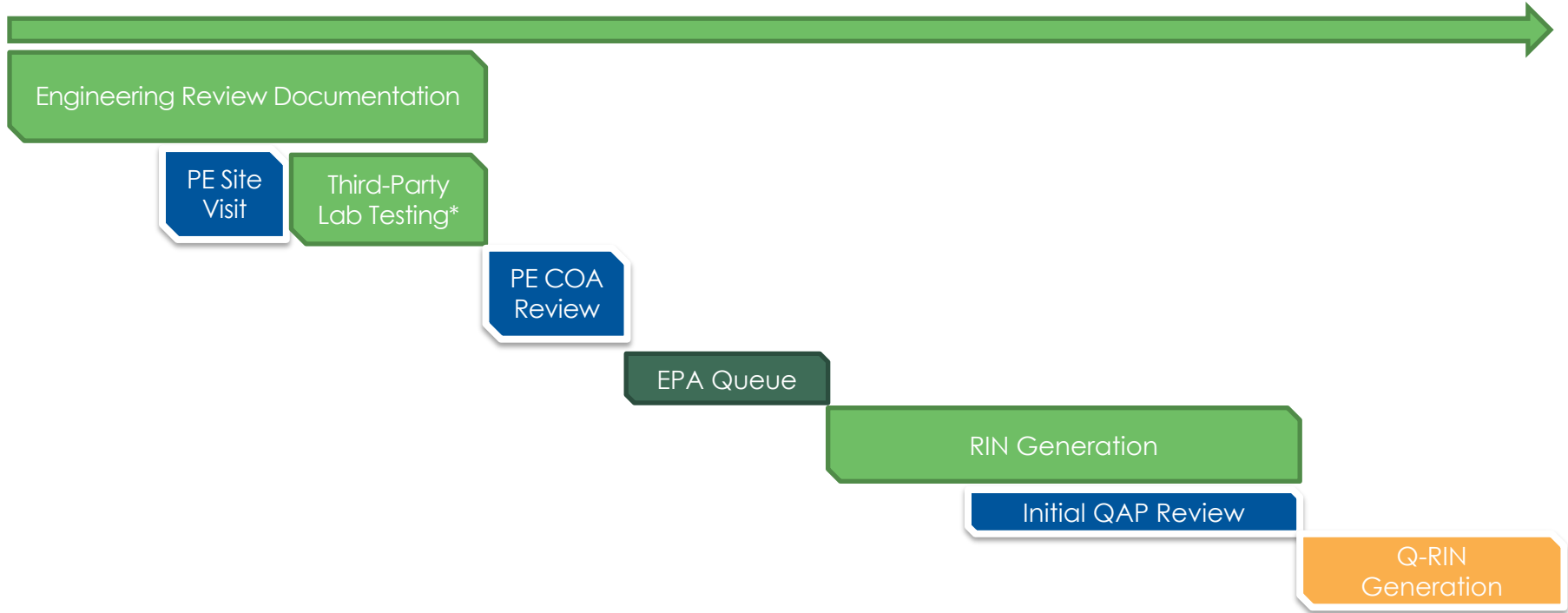
EPA Registration Biogas to CNG/LNG Pipeline Pathways

Registration

- ▶ Independent Engineering Review or 3-Year Update
 - Verify Technology on Site Visit
 - Confirm Blending on Site Visit
 - Review COAs and Pipeline Spec
 - Prepare Comparison Table

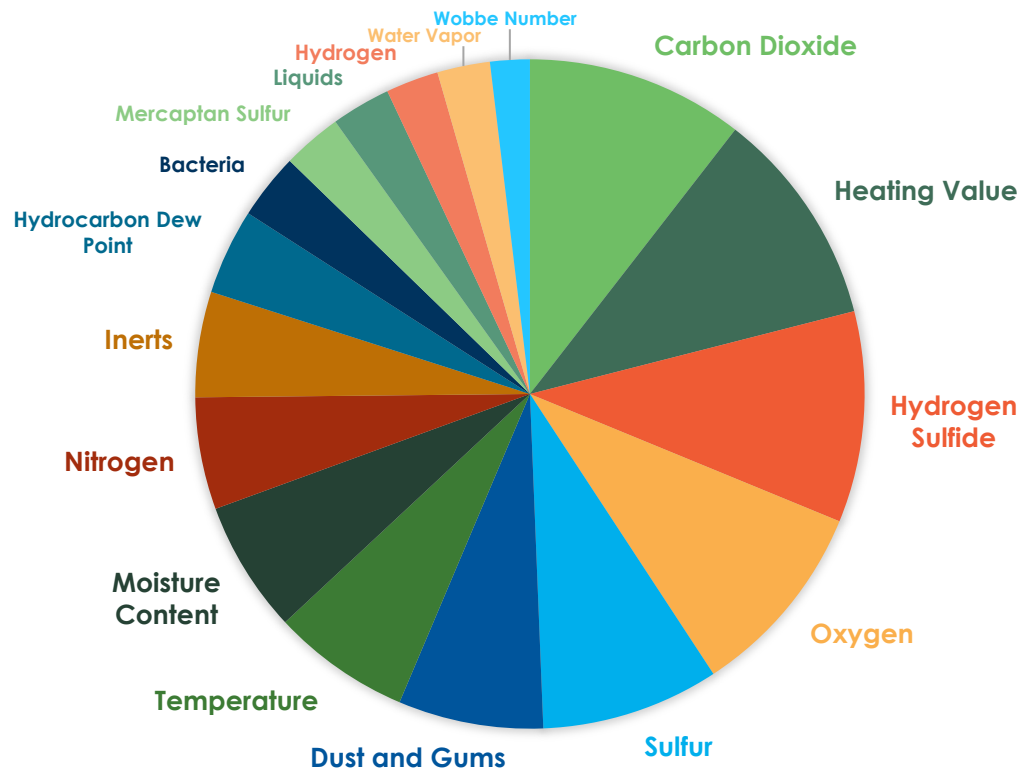


Registration - New



Registration - New

- ▶ Most common tests completed
 - More than 5 instances
 - Over 360 test results



Registration Renewal



EPA Representative, September 7, 2018:

- ▶ *Current biogas guidance does **not** require COAs to be done every three years when the facility ER updates are due.*
- ▶ *Facilities still need to be able to demonstrate that they meet pipeline quality requirements and any time EPA may request a facility make such a demonstration as part of our program **oversight** and **enforcement** activities.*



Proving Compliance

Ongoing Monitoring

To qualify for RINs:

- ▶ Must have in-line continuous GC to monitor BTU content of renewable gas **after** treatment and **before** blending
- ▶ Alternative: Develop a sampling protocol; submit for approval as part of registration application

RIN Generation

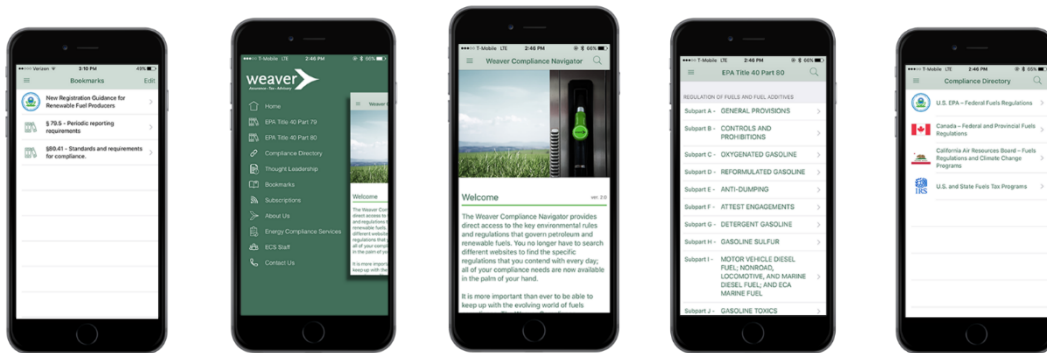
- ▶ RINs are based on BTU content of renewable gas **after** treatment and **before** blending or compression/ liquefaction
- ▶ Must document blend volumes
- ▶ Retain records showing continuous pipeline spec compliance

Compliance

- ▶ Failure to maintain registered processes, treatment and pathways is a violation
- ▶ Inadequately treated biogas
- ▶ Documentation requirements (5 years)

WEAVER'S COMPLIANCE NAVIGATOR APP

New features that simplify staying up to date with environmental regulations



- Searchable directories of the EPA's Code of Federal Regulations, Title 40, Parts 79 and 80
- Ability to bookmark important and relevant information
- Enhanced search capabilities
- Option to receive customized email and/or push notifications for both Compliance Updates and Weaver Thought Leadership



Questions?



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