



Rule 1168 Guidance Document

WORKING GROUP MEETING #2

JULY 26, 2018

Background

2

2017 Rule Amendment

- Included several new test methods

Governing Board Meeting

- Questioned how manufacturers could determine appropriate test method
- Directed staff to develop VOC Test Method Guidance Document

Prior to approval of Guidance Document

- Formulation data will be used to verify compliance

Rule 1168 History

As adhesives and sealants evolve, new test methods must be developed

Rule 1168 was adopted April 7, 1989

- 14 amendments since adoption
- Originally applicable only to adhesives
- 19 adhesive categories

1998 Amendment

Added sealants

- 6 sealants categories
- 5 sealant primer categories

2017 Amendment

Latest amendment

- 37 adhesive categories
- 5 adhesive primer categories
- 12 sealants categories
- 5 sealant primer categories

History of 1168 VOC Test Methods

1989

Rule referenced Laboratory Methods of Analysis for Enforcement Samples

- Gravimetric (bake and weigh) test method

1992

Additional Methods:

- Aerosols
- VOC exempt compounds
- Pipes cements

1998

Additional Methods:

- VOC exempt compounds

2000

Additional Methods:

- Cyanoacrylates

History of 1168 VOC Test Methods (cont.)

2017

Included 3 additional test methods

- Appendix A to Subpart PPPP of 40 CFR Part 63 - Determination of VOC Content of Reactive Adhesives
 - Included for reactive adhesives
 - Sandwich method where adhesive placed between two substrates

History of 1168 VOC Test Methods (cont.)

2017

Included 3 additional test methods

- SCAQMD Method 313 and ASTM D6886
 - For low-VOC, non-reactive adhesives and sealants
 - Directly measure VOC content by Gas Chromatography-Mass Spectrometry
 - SCAQMD Method 313 utilized for compliance purposes
 - Guidance document will include clarification on the differences between methods

Method Development

7

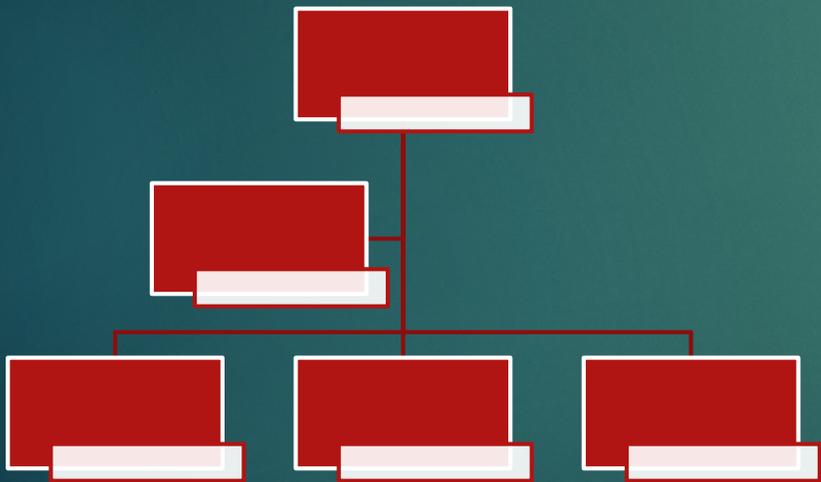
Beyond
2017



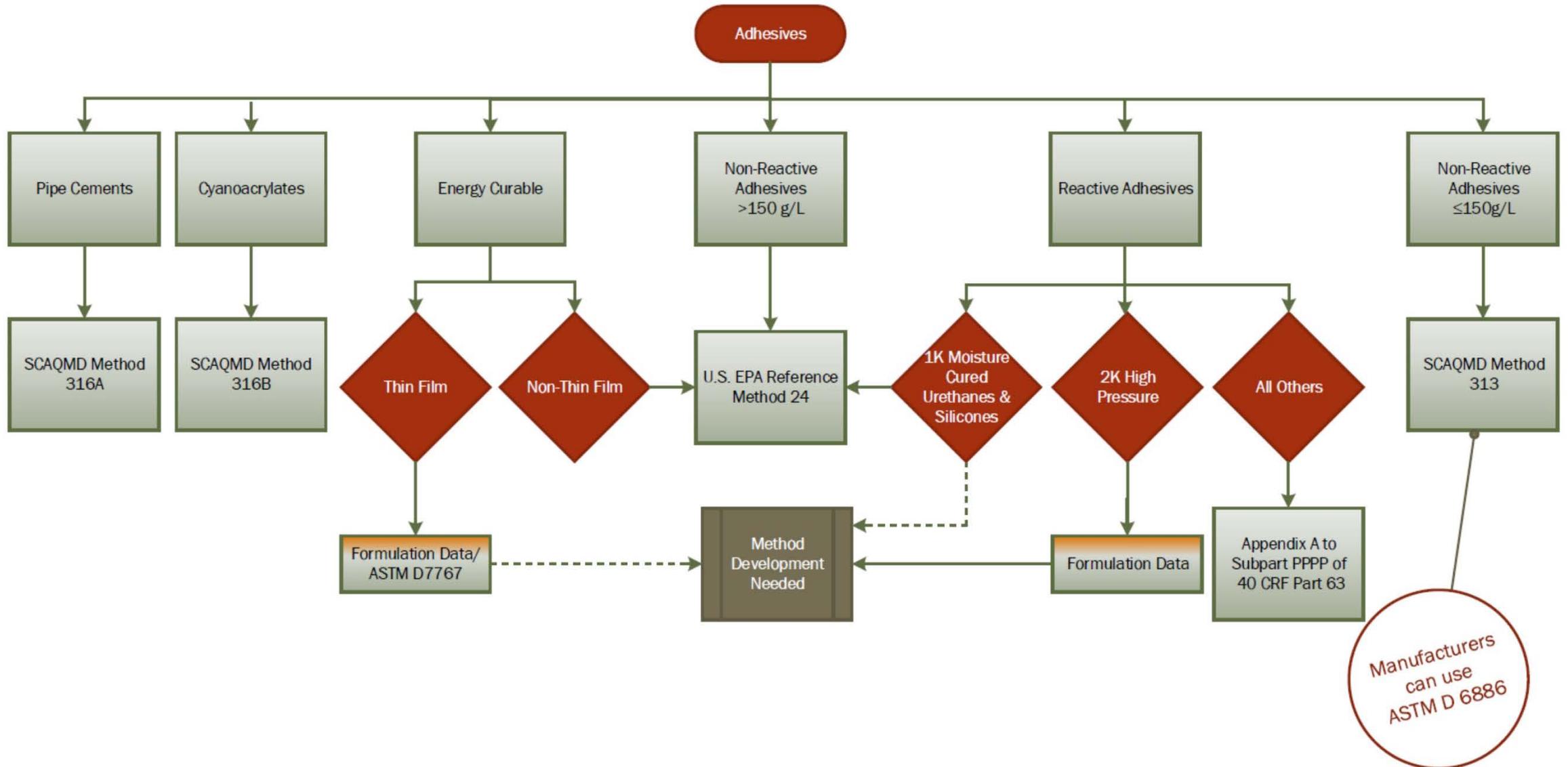
- Ongoing Method Development
 - Foam Sealants
 - High pressure reactive adhesives
- Potential Future Method Development
 - One-component moisture cure urethanes
 - Thin-film energy curable

Flow Charts

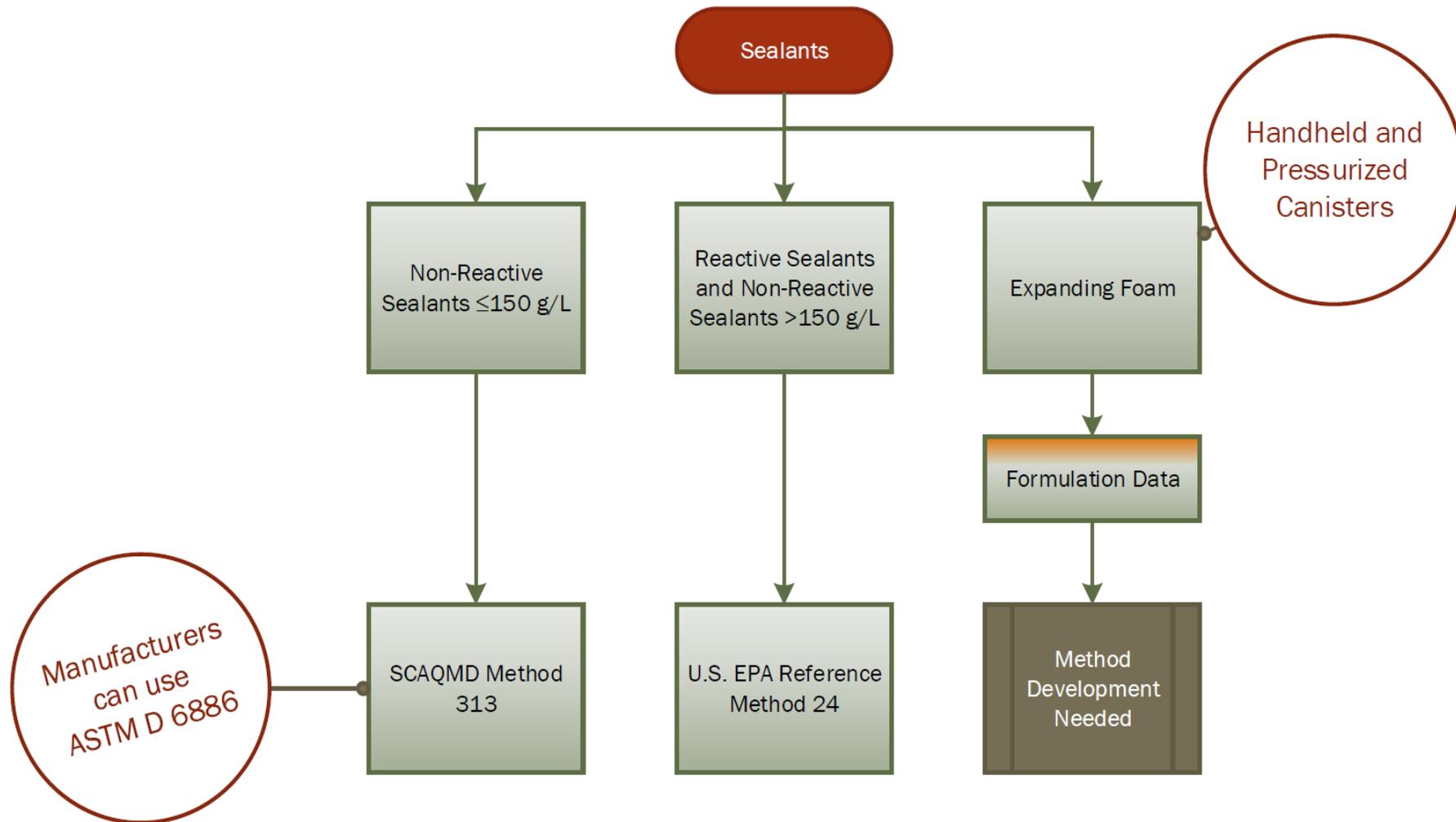
- The key mechanism of the Guidance Document
- Direct stakeholder to appropriate test method
- Separate charts for adhesives and sealants



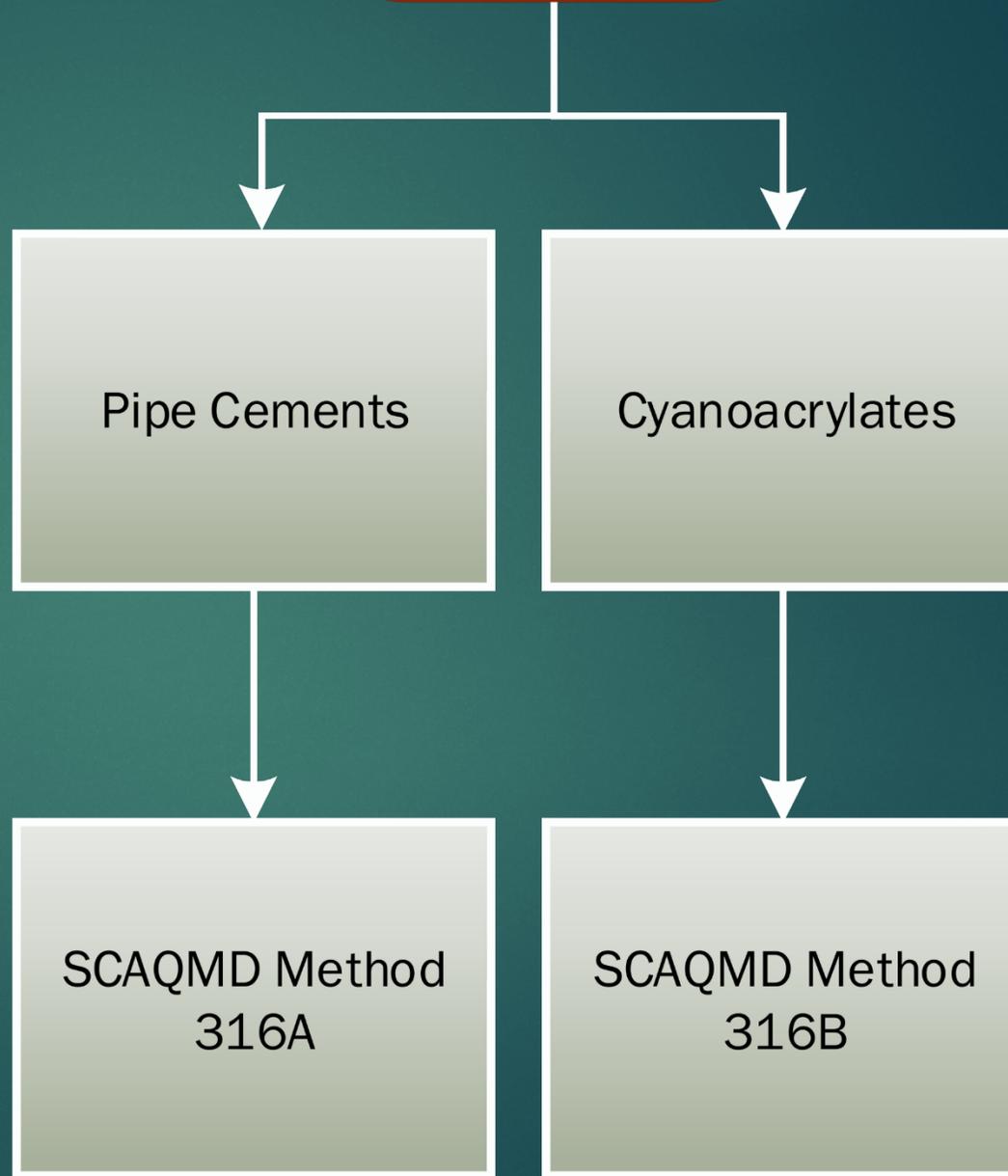
Adhesives



Sealants



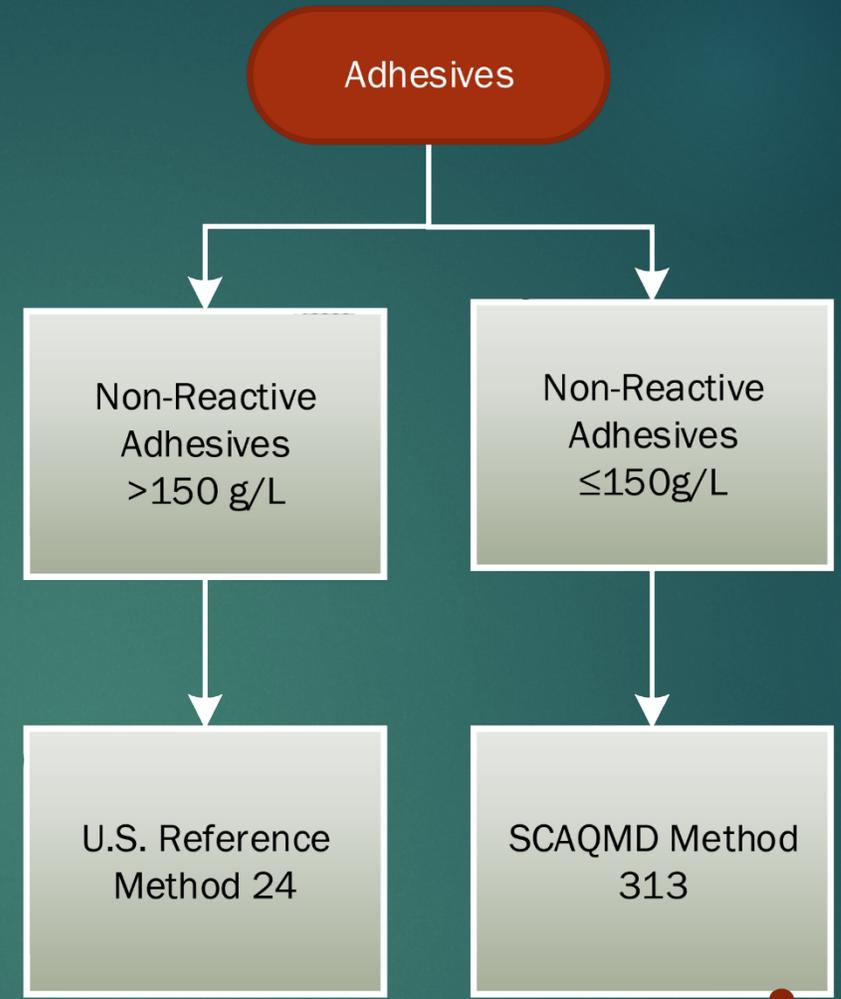
Adhesives



Adhesives
with
Specific
Test
Methods

Staff does not
anticipate further
method
development

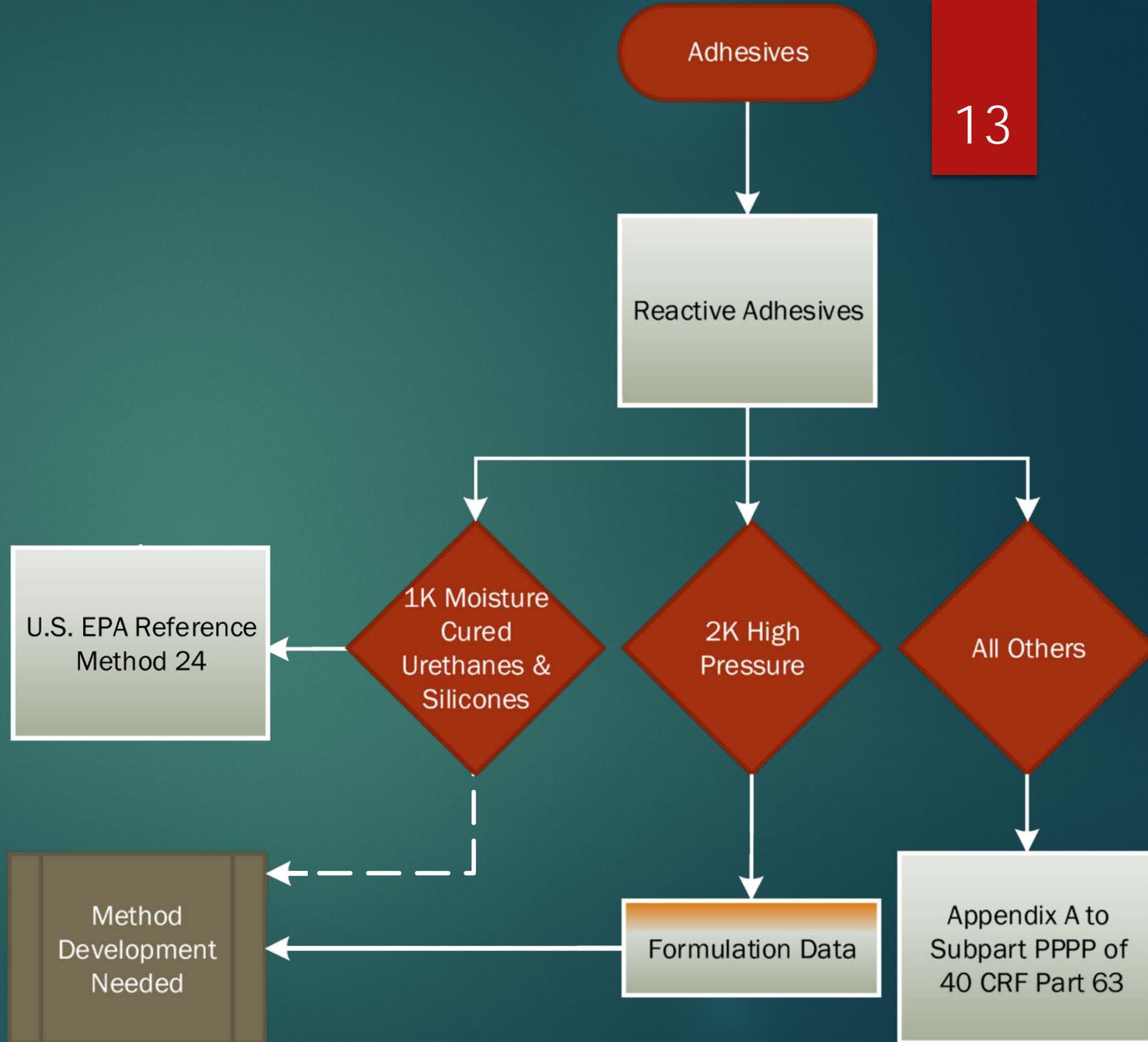
Non-Reactive Adhesives



Manufacturers can use ASTM D 6886

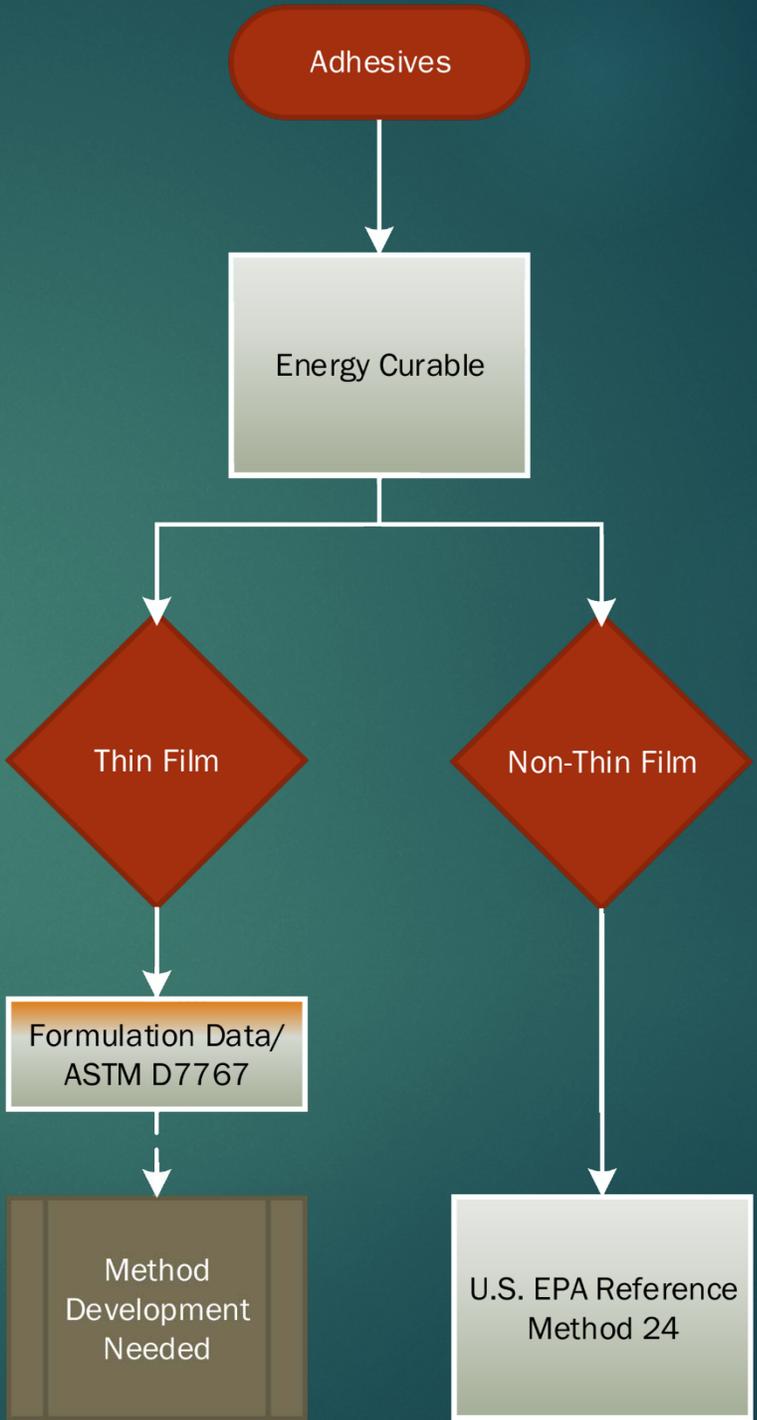
Reactive Adhesives

Some method development required



UV/EB/LED Technology

Possible future
method
development



Sealants

Sealants

Non-Reactive Sealants ≤ 150 g/L

Reactive Sealants and Non-Reactive Sealants > 150 g/L

Expanding Foam

Handheld and Pressurized Canisters

Manufacturers can use ASTM D 6886

SCAQMD Method 313

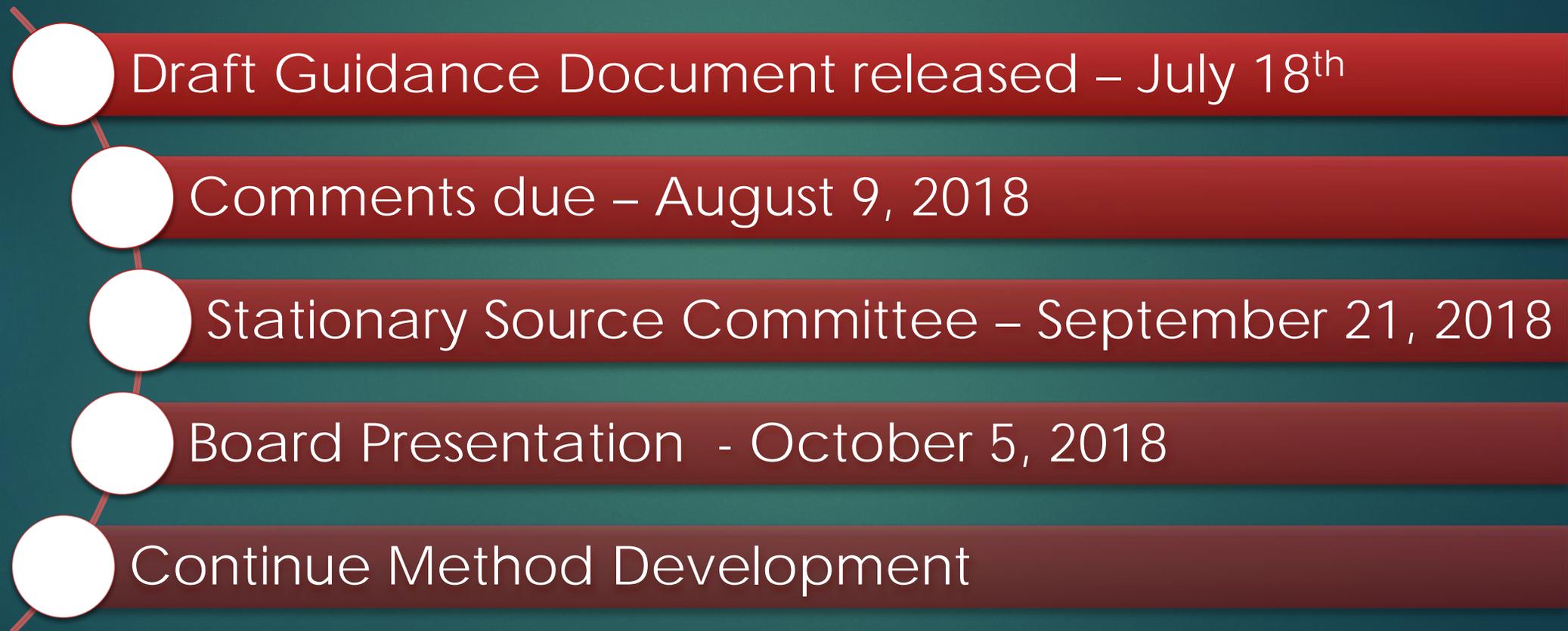
U.S. EPA Reference Method 24

Formulation Data

Method Development Needed

Next Steps

16

- 
- Draft Guidance Document released – July 18th
 - Comments due – August 9, 2018
 - Stationary Source Committee – September 21, 2018
 - Board Presentation - October 5, 2018
 - Continue Method Development

Contacts

17

Heather Farr

909-396-3672

hfarr@aqmd.gov

Program Supervisor

Planning, Rules and Area Sources

Brad Parrack

909-396-3071

bparrack@aqmd.gov

Principal AQ Chemist

Laboratory Services

David De Boer

909-396-2329

ddeboer@aqmd.gov

Area Sources Manager

Planning, Rules and Area Sources