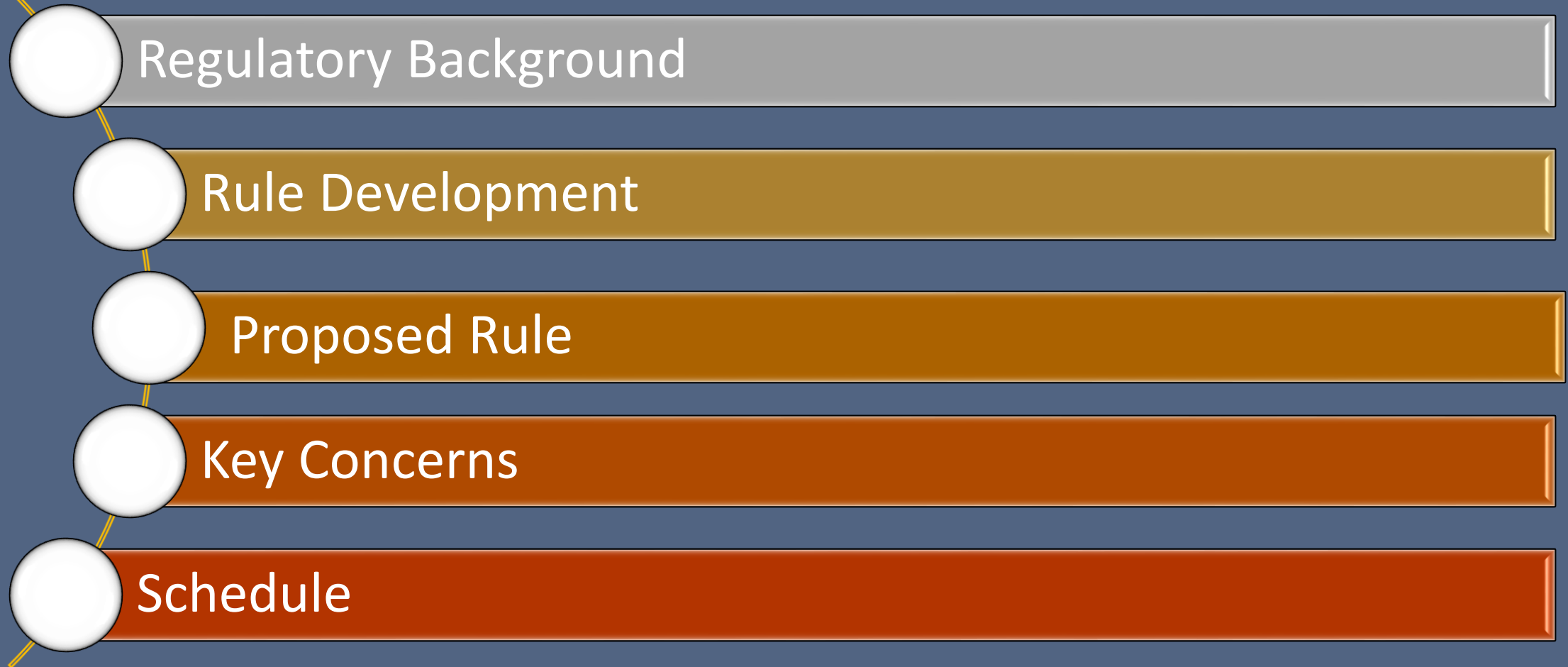


PROPOSED RULE 1118.1
Control of Emissions From
Non- Refinery Flares
Public Workshop and
CEQA Scoping Session

South Coast Air Quality Management District
Diamond Bar, California
October 17, 2018

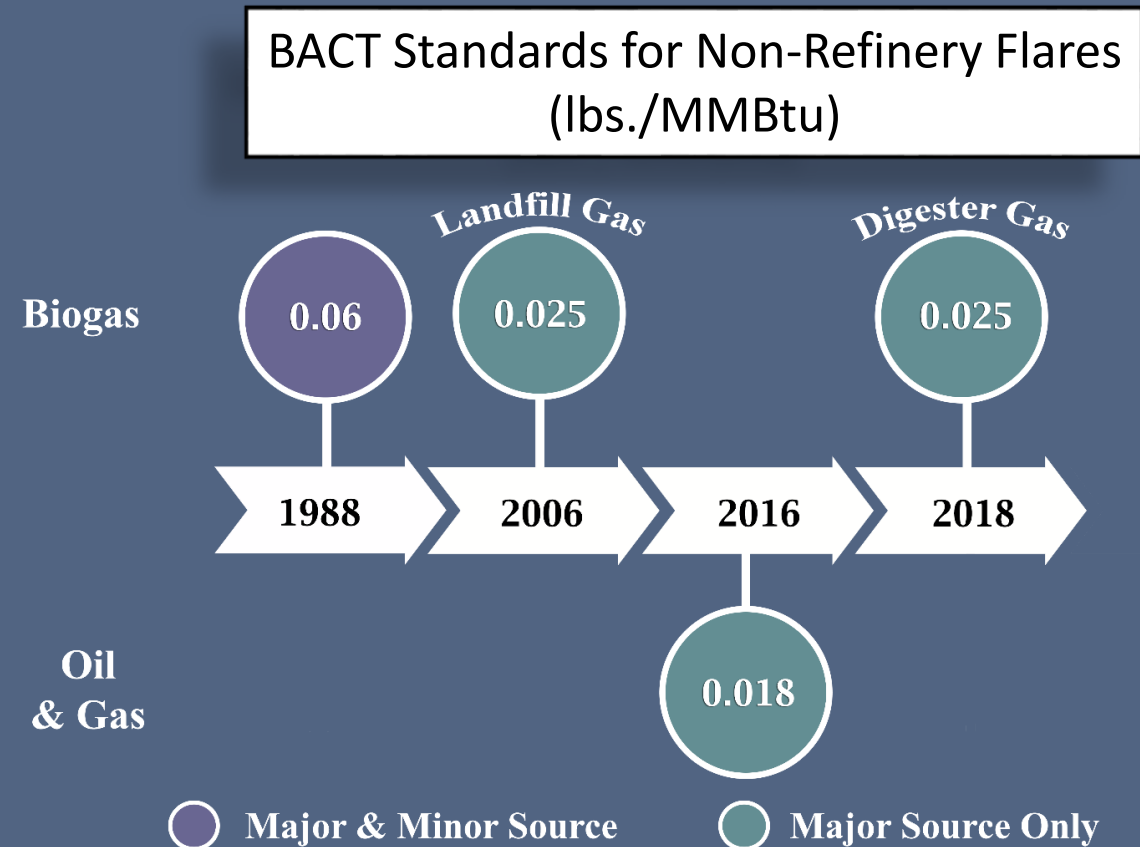


Agenda



Regulatory Background

- Currently no source-specific rule for non-refinery flares
 - ✓ New flares are subject to New Source Review Best Available Control Technology (BACT)
 - ✓ U.S. EPA RACT/RACM requires rule for non-refinery flares
 - Two California air districts adopted flare rules
- 2016 AQMP Control Measures
 - ✓ CMB-03 – Emission Reductions from Non-Refinery Flares
 - ✓ CMB-05 - Further NOx Reductions from RECLAIM Assessment



Rule Development – Initiated April 2017



Goals of Proposed Rule 1118.1

Minimize
routine
flaring

Establish a
capacity
threshold for
existing flares

Maximize
Emission
Reductions

Set threshold to
achieve
maximum
emission
reductions

Encourage
beneficial
use

Allow longer
time frame for
flare emission
reduction vs
flare
replacement

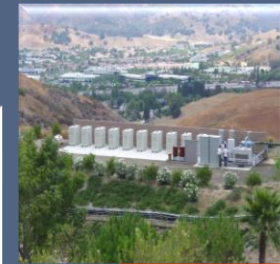
General Approach for PR 1118.1

- Different provisions for new and existing flares
- Designed to:
 - ✓ Provide compliance options that encourage beneficial use rather than flare replacement
 - Extended timeframe for flare reduction (e.g. increased beneficial use)
 - ✓ Accounts for different operational constraints for different source categories
 - ✓ Cost-effective by design



Flare Replacement

Install within 12 months of permit issuance



Flare Reduction

36 months from 2nd consecutive year surpassing threshold

Potential 12 month extension(s)

(a) Purpose

The purpose of this rule is to reduce NO_x and VOC emissions from flaring produced gas, digester gas, landfill gas, and other combustible gases or vapors and to encourage alternatives to flaring.

(b) Applicability

This rule applies to owners and operators of flares that require a SCAQMD permit at facilities, including, but not limited to, oil and gas production, wastewater treatment facilities, landfills, organic liquid loading stations, and tank farms.

(c) Definitions

- (1) ANNUAL THROUGHPUT means the volume of gas or vapor in million standard cubic feet (MMscf) that is combusted in a flare or flare station in one calendar year, excluding gas used solely to maintain the pilot light.
- (2) ASSIST GAS means a higher heating value gas required for complete

Proposed Rule Language

Structure of Proposed Rule 1118.1

Purpose

Applicability

Definitions

Requirements

Extension Provision

Source Tests

Monitoring, Recordkeeping, and Reporting Requirements

Exemptions

Purpose – Subdivision (a)

The purpose of this rule is to reduce NO_x and VOC emissions from flaring produced gas, digester gas, landfill gas, and other combustible gases or vapors and to encourage alternatives to flaring

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The purpose of this rule is to reduce NO_x and VOC emissions from flaring produced gas, digester gas, landfill gas, and other combustible gases or vapors and to encourage alternatives to flaring.

Applicability – Subdivision (b)

This rule applies to owners and operators of flares that require a SCAQMD permit at facilities, including, but not limited to, oil and gas production, wastewater treatment facilities, landfills, organic liquid loading stations, and tank farms.

(b) Applicability
This rule applies to owners and operators of flares that require a SCAQMD permit at facilities, including, but not limited to, oil and gas production, wastewater treatment facilities, landfills, organic liquid loading stations, and tank farms.

Definitions – Subdivision (c)

- Annual Throughput
- Assist Gas
- Biogas
- Capacity
- Capacity Threshold
- Digester Gas
- Facility
- Flare
- Flare Station
- Heat Input
- Landfill Gas
- Open Flare

- Organic Liquid
- Other Flare Gas
- Oxides of Nitrogen (NO_x)
- Produced Gas
- Protocol
- Regenerative Adsorption System
- Regeneration Gas
- Relocate
- Statement of Intent
- Various Locations Flare
- Volatile Organic Compound (VOC)

Key Definitions

FLARE means a combustion device that oxidizes combustible gases or vapors, where the combustible gases or vapors being destroyed are routed directly into the burner without generating energy for use.

- Fundamental definition of proposed rule
- Considerable effort to develop flare definition that distinguishes flares from afterburners, thermal oxidizers, and incinerators
- Proposing slight variation from preliminary draft

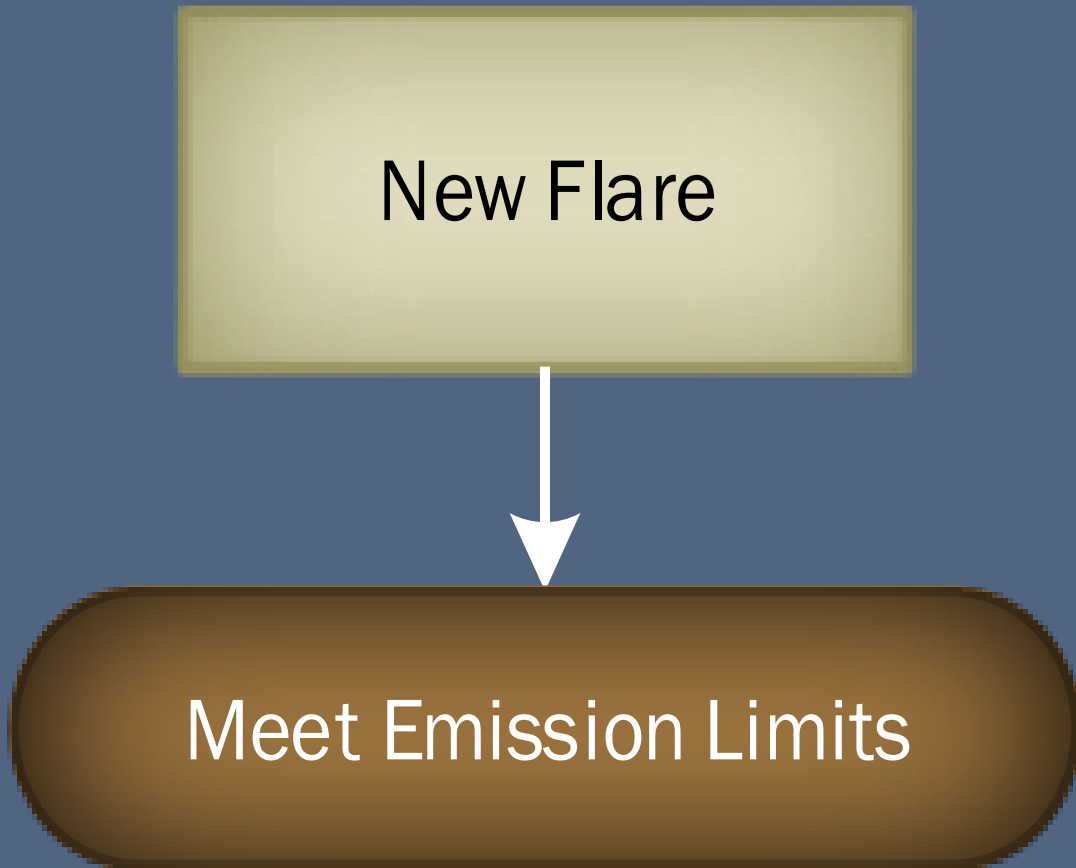
Key Definitions Added for Threshold

ANNUAL THROUGHPUT means the volume of gas or vapor in million standard cubic feet (MMscf) that is combusted in a flare or flare station in one calendar year, excluding gas used solely to maintain the pilot light

CAPACITY is the maximum volumetric flow rate of gas or vapor that the flare or flare station is rated to process in units of scf per minute or the maximum heat input rate of the flare or flare station in units of million British thermal units (MMBtu) per hour.

CAPACITY THRESHOLD is the percentage of the capacity used to flare gas when an owner or operator of a flare or flare station must take action to reduce NO_x emissions and/or reduce the throughput to the flare.

Requirements – Subdivision (d)

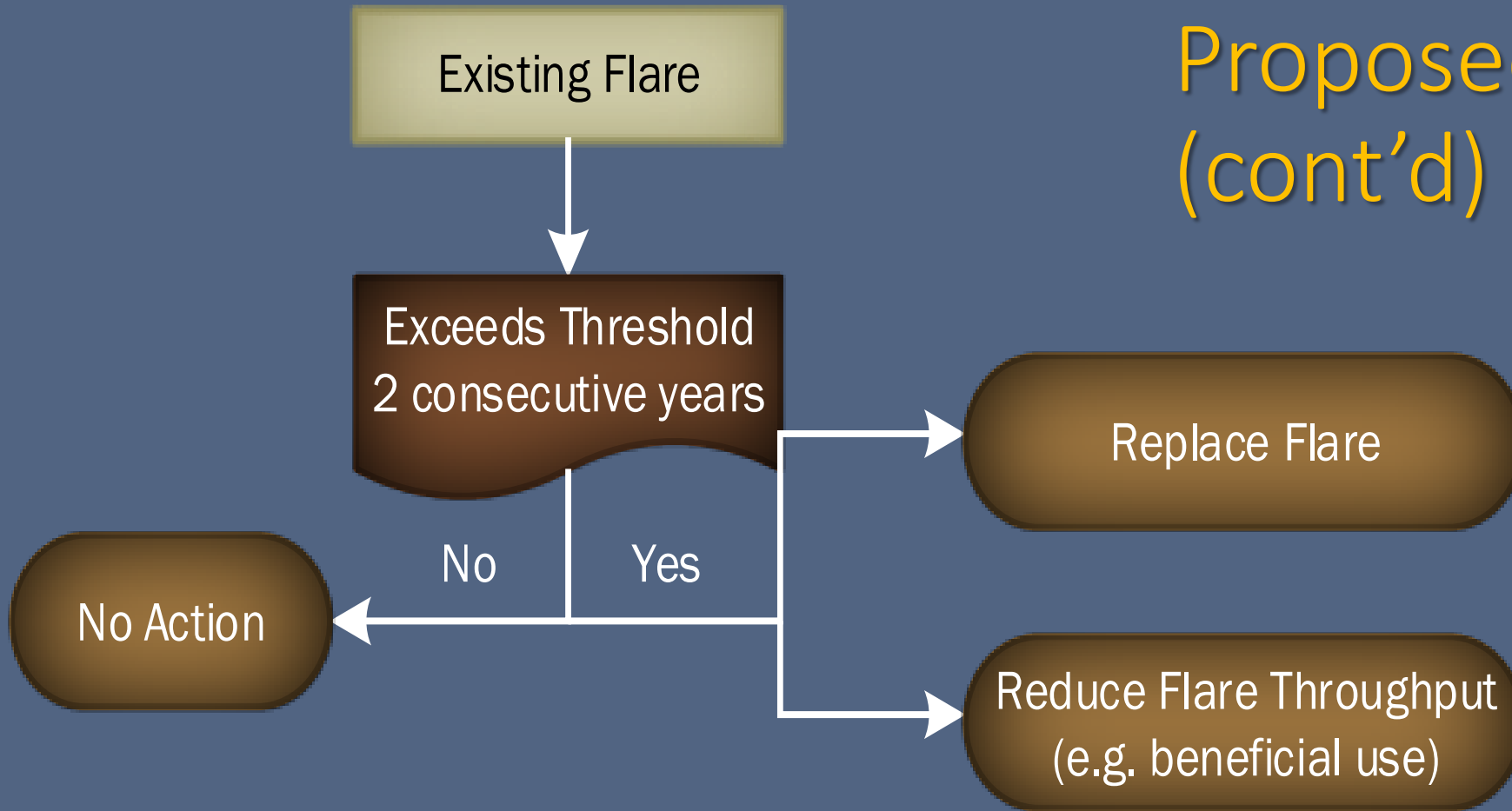


Flare Gas	NOx	CO	VOC
	Pounds/MMBtu		
Digester gas	0.025	0.06	0.038
Landfill gas	0.025	0.06	0.038
Produced gas from Oil Extraction	0.018	0.06	0.038
Other flare gas	ppmv 3% O ₂		DE*
	30	10	99%

*DE = Destruction Efficiency

0.018 pounds/MMBtu ~ 15 ppm

Proposed Requirements (cont'd)



Capacity Thresholds	
Flare Gas	Threshold
Any gas combusted in open flare	5%
Digester gas	70%
Landfill gas	20%
Produced gas from Oil Extraction	5%

- Capacity thresholds for each source category based on:
 - ✓ Source category emissions and flare replacement costs
 - ✓ Maximum emission reduction to be achieved
- No threshold for “other flaring” due to low volume, diverse gas stream and limited beneficial use opportunities

Proposed Requirements (cont'd)

- Proposing clarification on the requirements (paragraph (d)(2)) for “Other Flaring” - preliminary draft rule was not clear

An owner or operator of a flare or flare station, subject to the capacity threshold in Table 2, and installed prior to [*date of adoption*] shall:

- (A) Demonstrate compliance with the emission limits in Table 1, or
- (B) Calculate the percent capacity

Extension Provisions – Subdivision (e)

- Executive Officer may grant a one year extension(s) if a request is submitted within 60 days of scheduled deadline
- Extension request must include:
 - ✓ Permit or application number
 - ✓ Reason for extension request
 - ✓ Increments of progress and remaining tasks
 - ✓ Length of time requested

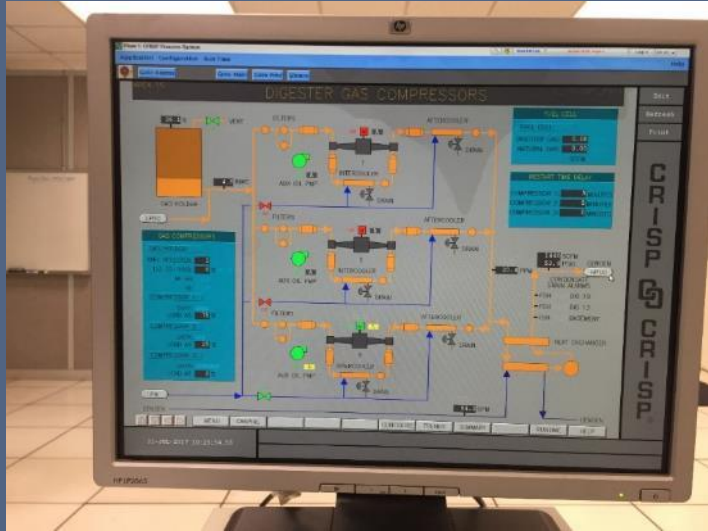


Source Tests – Subdivision (f)

- Required within 12 months of rule adoption, every five years thereafter
 - ✓ Prior source tests with approved protocols will be allowed
- Only required if subject to emission limit or complying with low-emitting exemption



Monitoring, Recordkeeping, and Reporting Requirements – Subdivision (g)



- Flares subject to capacity threshold
 - ✓ Install fuel meter(s) within 90 days of rule adoption, if not currently installed
 - ✓ Once installed, begin monthly recordkeeping
 - ❑ Throughput and/or heat input
 - ✓ Calculate annual percent capacity
 - ✓ Percent capacity will be presumed 100% upon failure to monitor/keep records

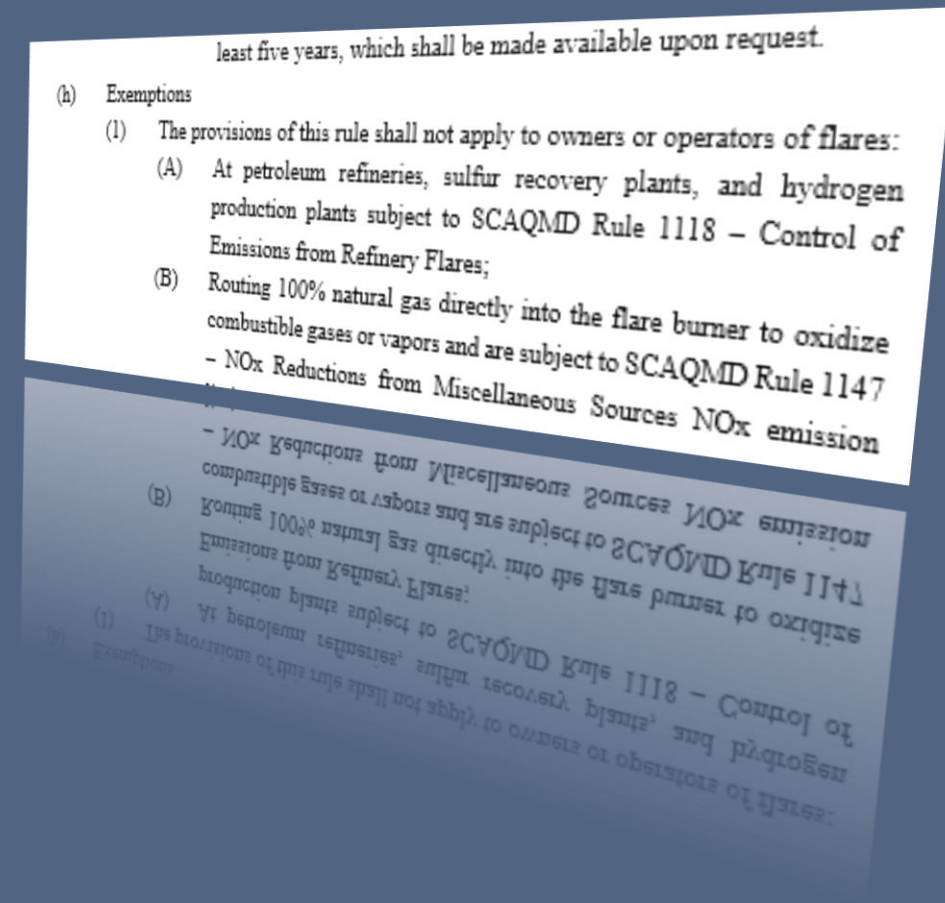
Monitoring, Recordkeeping, and Reporting Requirements – Subdivision (g) (cont'd)

- Clause (g)(1)(E)(B) will be clarified as follows to address the handheld device used to measure methane:

Heating ~~input~~ value of the flare gas shall be measured and recorded at least once per month pursuant to (f)(6) or calculated and recorded by measuring the methane concentration weekly with a portable nondispersive infrared detector, calibrated per manufacturers specifications.

Exemptions – Subdivision (h)

- Exemptions included for flares:
 - ✓ Subject to Rules 1118, 1147, or 1109.1
 - ✓ At landfills that generate less than 2,000 MMscf and cease accepting waste
 - ✓ Various location flares
 - ✓ Exempt low-use (<200 hours) and low-emitting flares (<30 lbs of NOx/month)



Key Concerns

Comment

- Allow installation of new higher emitting flares (0.06 lb/MMBtu) at *minor source* wastewater treatment plant
- Include landfills that only accept inert or asbestos contaminated waste in the 2,000 MMscf exemptions

Response

- Consideration to allow higher limit for minor source digester gas flares with a capacity threshold
- Staff agrees and is considering including landfills classified by CalRecycle as an Inert Waste Disposal Site or an Asbestos Contaminated Waste Site to the proposed exemption

Key Concerns (cont'd)

Comment

- Small facilities or facilities with small flares likely to exceed thresholds could be fiscally burdened
- Not enough incentive for oil and gas facilities to change to beneficial use

Response

- Rule does not require flare replacement, other options may be more cost effective; rule provides opportunity for long term planning
- Low-NOx flares emit 70% less emissions; low capacity threshold also incentivizes beneficial use as an option, rather than flare replacement

California Environmental Quality Act (CEQA)

- PR 1118.1 is a project subject to CEQA
- Decision to prepare 30-day Draft Environmental Assessment (EA)
 - ✓ No significant impacts are expected with PR 1118.1
 - ✓ CEQA scoping meeting, analysis of alternatives, and mitigation measures are not required
 - ✓ Will evaluate the revised project's impacts on 17 topic areas
 - ✓ To be released for 30-day public review period
 - ✓ Final EA will include responses to Draft EA comment letters and any necessary modifications to Draft EA

Proposed Rule 1118.1 Schedule



- Stakeholder Meetings
 - ✓ Ongoing
- Preliminary Draft Staff Report and Draft Rule Released September 21st
 - ✓ Comments Due October 31st
- Release of CEQA Analysis – October 26th
 - ✓ Close of comment period – November 27th
- Set Hearing
 - ✓ November 2nd
- Release Socioeconomic Assessment and Draft Staff report and Rule – November 6th
- Public Hearing
 - ✓ December 7th