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# PROPOSED AMENDED RULES 1146, 1146.1, 1146.2 & PROPOSED RULE 1100 WORKING GROUP #4

APRIL 12, 2018

SCAQMD

DIAMOND BAR, CA

# Agenda

- ❑ Updates on Data Analysis
- ❑ Rule Applicability
- ❑ CEMS Requirements
- ❑ Additional Revisions

# Rule 1146 Series Rules

## □ Rule 1146 series rules – the first set of landing rules

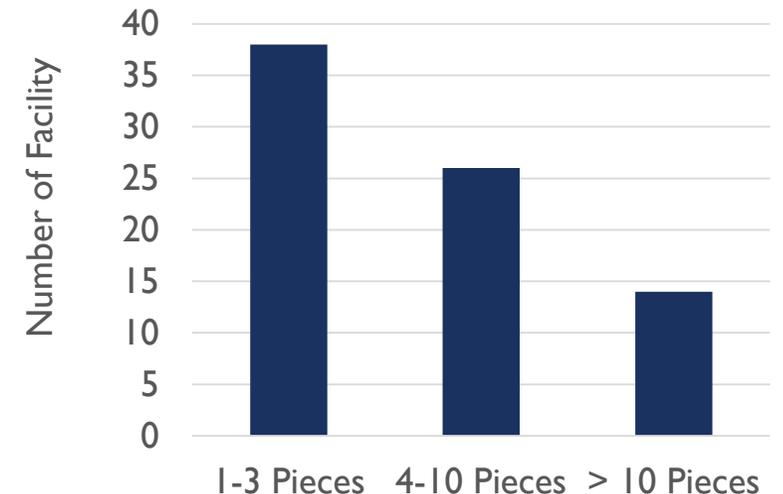
- Remove RECLAIM exemptions
- Add provisions for RECLAIM facilities
- Will address facilities that will be transitioned under an industry specific rule separately
  - Electricity Generating Facilities (EGFs), refineries, metal operations facilities, aggregate facilities
  - Possibly other industries (to be determined)

Rule	Applicability	Size
<b>Rule 1146</b>	Boilers, steam generators, and process heaters	$\geq 5$ million Btu per hour
<b>Rule 1146.1</b>	Boilers, steam generators, and process heaters	$>2$ and $<5$ million Btu per hour
<b>Rule 1146.2</b>	Natural gas-fired water heaters, boilers, and process heaters	$\leq 2$ million Btu per hour

# Data Analysis

- ❑ Staff concluded that facilities with 8 or more Rule 1146 and/or Rule 1146.1 units can meet the NO<sub>x</sub> concentration limits within 3.5 years
  - Despite the larger number of units, they are relatively small in equipment size
- ❑ Staff concluded that facilities with 10 or less other units can meet the NO<sub>x</sub> concentration limits within 3.5 years
  - Most units subject to Rule 1147 (Miscellaneous Sources), which is scheduled to be amended in 2019
    - Implementation period is likely to be after Jan. 1, 2021
  - Most facilities (95%) have 5 or less Rule 1146 and/or Rule 1146.1 units
    - Most units to be retrofitted by Jan. 1, 2021
- ❑ Staff further analyzed data for facilities with > 10 units of other RECLAIM equipment to:
  - Better understand the emissions from different source types
  - Establish the appropriate compliance schedule for these facilities

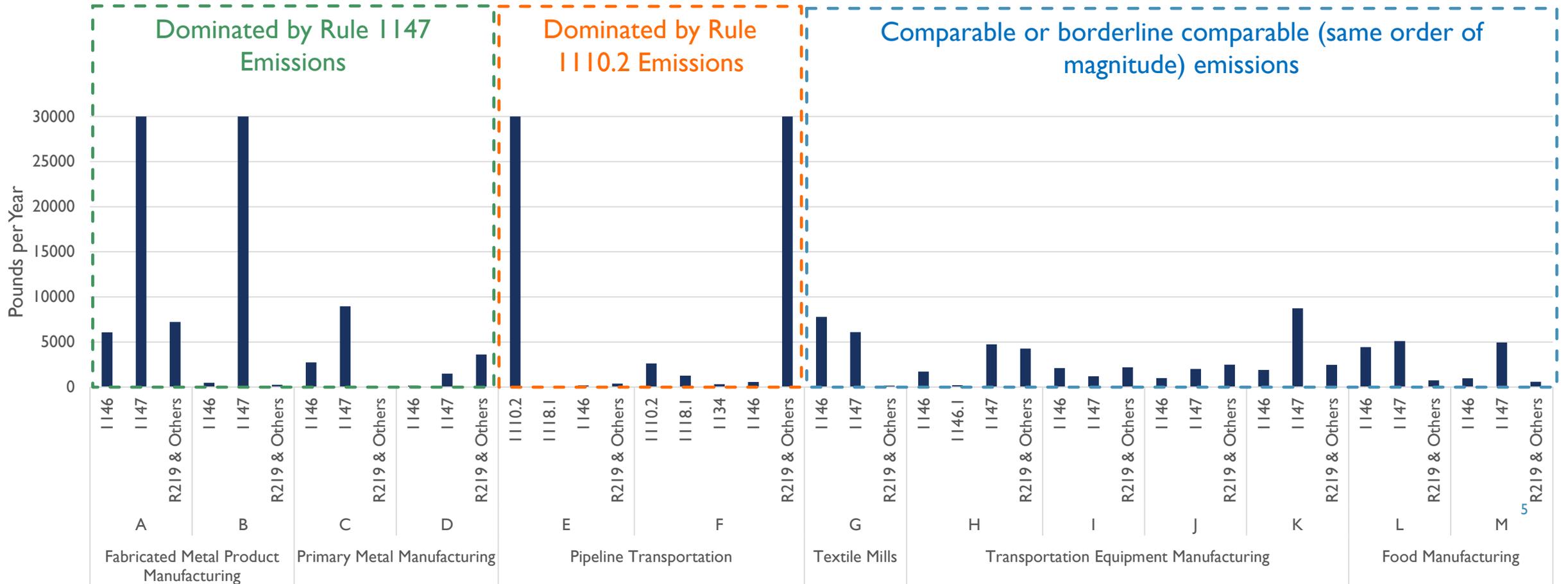
Pieces of Equipment Subject to Other Landing Rules per Facility\*



\*Excludes Rule 1470 equipment

# Emissions from Facilities with more than 10 Other Units

NOx Emissions from RECLAIM Facilities in Year 2016



# Analysis of Facilities with more than 10 Other Units

## ❑ Facilities Dominated by Rule 1147 Emissions

	Pieces of RI 1146/1146.1 Unit	Pieces of RI 1147 Unit
A	5	23
B	3 (two units eligible for defer compliance)	17
C	2	21
D	2 (both at BARCT)	8

## ❑ Facilities Dominated by Rule 1110.2 Emissions

	Pieces of RI 1146/1146.1 Unit	Pieces of RI 1110.2 Unit
E	2 (both at BARCT)	10
F	5 (two units at BARCT)	10

- ❑ Facilities with > 10 other units can meet the emission limit within the 3.5 years timeframe
  - ≤ 5 pieces of Rule 1146 series equipment between 3-33 MMBtu/hr

# PARs 1146 and 1146.1 Applicability

- PARs 1146 and 1146.1 will apply to RECLAIM facilities
  - Excludes refineries and EGFs
    - To be addressed in industry-specific rules
  - Includes metal and aggregate facilities
    - The industry-specific rules are scheduled to be adopted in 2019
      - Implementation period is likely to be after Jan. 1, 2021
    - Facilities with  $\leq 5$  pieces of Rule 1146 and/or 1146.1 equipment are required to meet the NOx limit by Jan. 1, 2021 for most units
  
- List of RECLAIM facilities subject to Rule 1146 series
  - See Attachment 1 (including both BARCT and non-BARCT facilities)

# Continuous Emission Monitoring (CEMS) Requirements

## Continuous Emission Monitoring (CEMS) Applicability Threshold

	Rule 1146	RECLAIM
Size	40 MMBtu/hr	40 MMBtu/hr
Fuel Usage	200 Billion Btu per year	90 Billion Btu per year

- ❑ Evaluated 2015 / 2016 fuel usage data for units  $\geq$  40 MMBtu/hr at RECLAIM facilities
  - Ten units reported fuel usage between 90 and 200 billion Btu per year
- ❑ Staff has been in communication with EPA regarding aligning the CEMS applicability thresholds to Rule 1146 for facilities transitioning from RECLAIM to command and control
  - Rule 1146 is SIP-approved
  - Staff is recommending that post-RECLAIM facilities to be subject to the same CEMS applicability threshold as non-RECLAIM facilities (200 billion Btu per year)
  - Any modification to MRR approaches would constitute a significant Title V permit revision and would trigger public notification requirements and EPA approval
    - Title V MRR requirements may need to be addressed separately

# Recommendations for PARs 1146 and 1146.1

- ❑ Maintain existing NO<sub>x</sub> concentration limits (emission limits still represent BARCT)
- ❑ Defer Compliance for units between 2-20 MMBtu/hr if:
  - Unit can demonstrate that NO<sub>x</sub> concentration is 12 ppm or less
    - Existing provisions allow natural gas units between 2-20 MMBtu/hr permitted at 12 ppm or less may defer compliance until burner(s) replacement (Rule limit = 9 ppm)
- ❑ Implementation schedule specified in Proposed Rule 1100

# Recommendations for PAR 1146.2

- ❑ Initial Rule Language
  - RECLAIM facilities with Rule 1146.2 equipment can exit RECLAIM, but will not be subject to end-user limit of 30 ppm for the next 2-3 years
  - Issues:
    - Rule 2002 specifies that RECLAIM source equipment meet current command-and-control BARCT rules to exit RECLAIM
    - State law requires BARCT
      - RECLAIM facilities meet BARCT through the cap-and-trade approach
      - Post-RECLAIM facilities need to meet BARCT in command-and-control rules
- ❑ Revised Rule Language (Released with CEQA document on April 3, 2018)
  - Added a compliance date of December 31, 2023 to address BARCT requirements
- ❑ New staff recommendations
  - To add a provision to include a commitment to technology assessment by January 1, 2022
    - If BARCT is the same as existing rule requirements (30 ppm), compliance by December 31, 2023
    - If BARCT is less than 30 ppm, a new compliance schedule will be developed
- ❑ Inventory data to be collected through (1) initial determination notifications and (2) annual audit inspections

# Recommendations for Proposed Rule 1100

- ❑ Group all equipment subject to Rule 1146 and Rule 1146.1
  - Allows for compliance flexibility while ensuring achievement of greatest emission reductions early
- ❑ Proposing
  - 75% of units by heat input for Rule 1146 and 1146.1 units (including BARCT-compliant equipment) by Jan. 1, 2021; 100% of units by heat input by Jan 1, 2022
  - Facilities committed to replace existing boilers/heaters (whole units) will be allowed until January 1, 2023 to replace unit
    - Facility must notify SCAQMD that unit will be replaced by 12 months after rule adoption
  - Submit a complete permit application by 12 months after rule adoption (leaving ~18-30 months for permit approval, installation & source testing)

# Rule Schedule

- Nov 2017 – Mar 2018 Working Group Meetings
- Feb 14, 2018 Public Workshop & CEQA Scoping Meeting
- Feb 28, 2018 Close of Public Comments
- Apr 12, 2018 Additional Working Group Meeting
- Apr 20, 2018 Stationary Source Committee
- May 4, 2018 Set Hearing
- Jun 1, 2018 Public Hearing

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