
PROPOSED AMENDED RULES 1146, 1146.1, 1146.2 & PROPOSED RULE 1100 WORKING GROUP #3

MARCH 7, 2018

SCAQMD

DIAMOND BAR, CA

Agenda

- ❑ Public Comments
- ❑ Updates on Data Analysis
- ❑ 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
Rule 1146	Boilers, steam generators, and process heaters	≥ 5 million Btu per hour
Rule 1146.1	Boilers, steam generators, and process heaters	>2 and <5 million Btu per hour
Rule 1146.2	Natural gas-fired water heaters, boilers, and process heaters	≤ 2 million Btu per hour

Public Comments

- ❑ Four comment letters received by due date of February 28, 2018
 - Disneyland
 - Southern California Gas Company
 - Plains West Coast Terminals
 - Southern California Air Quality Alliance
- ❑ Key Comments
 - Compliance Dates
 - Permit Application Submittal Date
 - Permitting / Compliance
 - Monitoring, Reporting, and Recordkeeping

Permit Application Submittal Date

□ Comment:

- Multiple concerns about the permit application deadline of August 1, 2018
- Additional time (ranging from 7-18 months from rule adoption) is needed for engineering design and analysis, budgeting, contracting, and management approval

□ Response:

- Permit application deadline has been extended to 12 months after rule adoption (i.e., May 2019)

Compliance Dates

□ Comment:

- One commenter requested compliance dates to be extended (30 months after Permit to Construct is issued)

□ Response:

- Current compliance schedule is 75% of units by heat input for Rule 1146 and 1146.1 units by Jan. 1, 2021 in PR 1100; 100% of units by Jan 1, 2022
- Proposed compliance schedule is consistent with the compliance timeframe allowed in previous Rules 1146 and 1146.1 amendments

Permitting Requirements

□ Comment:

- Permit conditions might not be updated in time to reflect the requirements of command-and-control rules

□ Response:

- Facilities can still comply with command-and-control requirements with existing permits
- As a facility modifies its equipment, permits can be modified to reflect compliance with command-and-control rule
- SCAQMD staff is assessing how to update permits to minimize resource impacts to the facility as well as staff

Monitoring, Reporting and Recordkeeping (MRR) Requirements

□ Comment:

- RECLAIM facilities should be subject to the MRR requirements in the landing rules
- Requirements such as daily monitoring and reporting of emissions, and missing data provisions should not be required for facilities no longer in RECLAIM

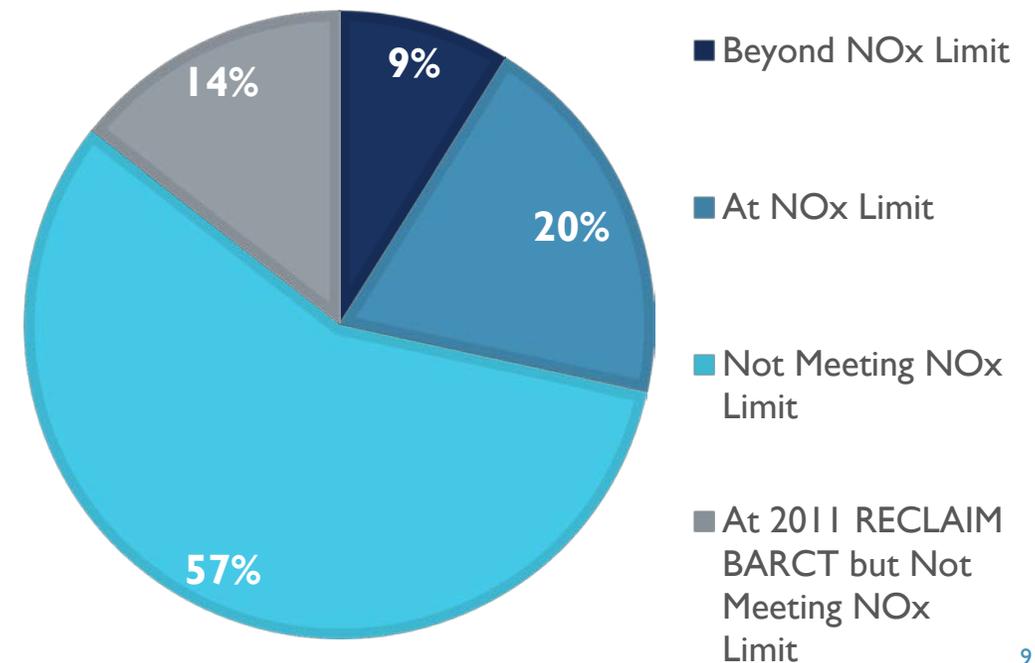
□ Responses:

- Non-Title V facilities are, in most circumstances, subject to the MRR requirements in Rule 1146 series, after exiting RECLAIM
- For Title V facilities, EPA public process is triggered by modifications to the monitoring and recordkeeping requirements
 - Staff is recommending that Title V facilities will maintain existing monitoring and recordkeeping requirements while the transition process proceeds
 - Additional time is needed to address those issues
 - Staff is committed to re-evaluate monitoring and recordkeeping provisions for Title V facilities

RECLAIM Universe

- ❑ Reviewed permits for all Rule 1146 and 1146.1 units in RECLAIM
 - Focused on units currently not meeting Rule 1146 and/or Rule 1146.1 NOx concentration limits
 - Excluded Refineries and EGFs
- ❑ Staff further analyzed data for facilities with 8 or more Rule 1146 and 1146.1 equipment and those with > 10 units of other RECLAIM equipment to:
 - Better understand the emissions from different source types
 - Establish the appropriate compliance schedule for these facilities

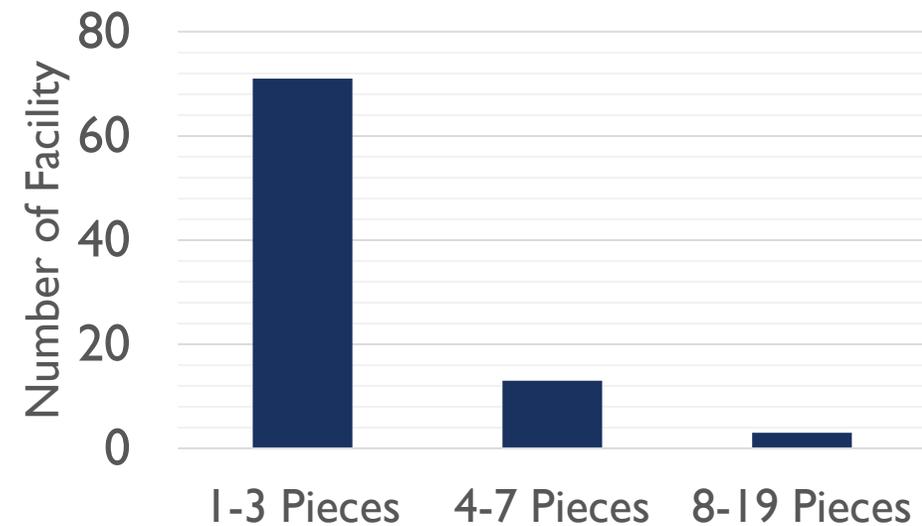
Rule 1146 and Rule 1146.1 Equipment in RECLAIM (Total = 306 Units)



Analysis of Rule 1146 and 1146.1 Units Currently Not Meeting NO_x Limit Per Facility

- Staff believes that facilities with 7 or less units can meet the NO_x concentration limits within 3.5 years
 - Facility operators indicated 2-3 years is a reasonable timeframe from individual meetings
 - Compliance timeframe in previous Rules 1146 and 1146.1 amendments is 3-5 years for most units
 - Universe was almost 10 times larger (~2100 units in 2008 amendment vs. ~220 non-complaint units in RECLAIM)
- Staff further assessed the compliance schedule with the facilities with 8 or more Rule 1146 and/or Rule 1146.1 units, and believes that these 3 facilities can meet the NO_x concentration limits within 3.5 years
 - Facility A – 19 R1146 units (5-20 MMBtu/hr)
 - Facility B – 4 R1146 units (5-20 MMBtu/hr) and 7 R1146.1 units
 - Facility C – 2 R1146 units (20-75 MMBtu/hr) and 6 R1146.1 units
 - Despite the larger number of units, they are relatively small in equipment size
 - Compliance can be achieved with ultra-low NO_x burners

Pieces of Non-Compliant Equipment (Rule 1146 & Rule 1146.1) per Facility

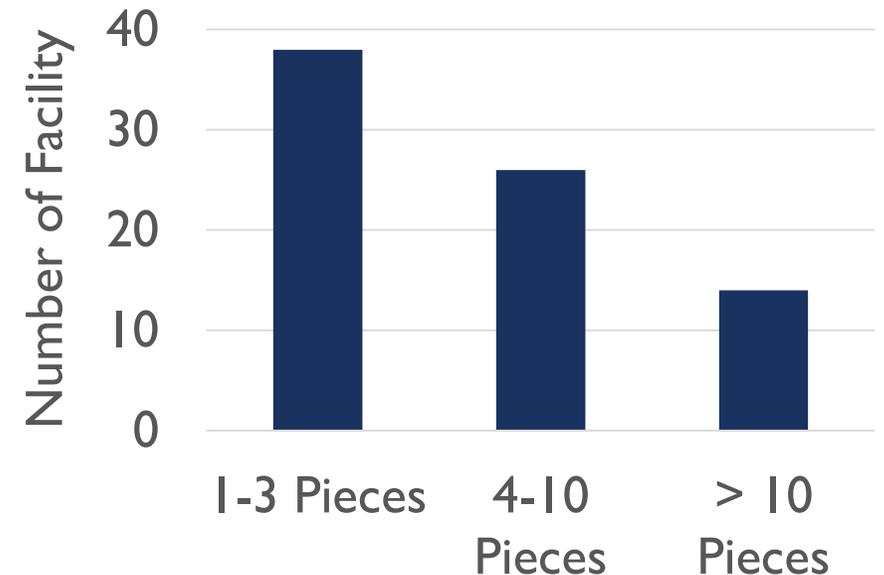


Analysis of Facilities with Rule 1146 and 1146.1 Equipment and Other Landing Rules

Findings

- About half of facilities had 3 or less non-Rule 1146 and 1146.1 units* (“other units”)
 - 26 facilities had between 4 and 10 other units
 - 14 facilities had > 10 other units
- Staff believes that facilities with 10 or less other units can meet the NO_x concentration limits for Rule 1146 and/or Rule 1146.1 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
- Staff further assessed the compliance schedule with the facilities with more than 10 other units

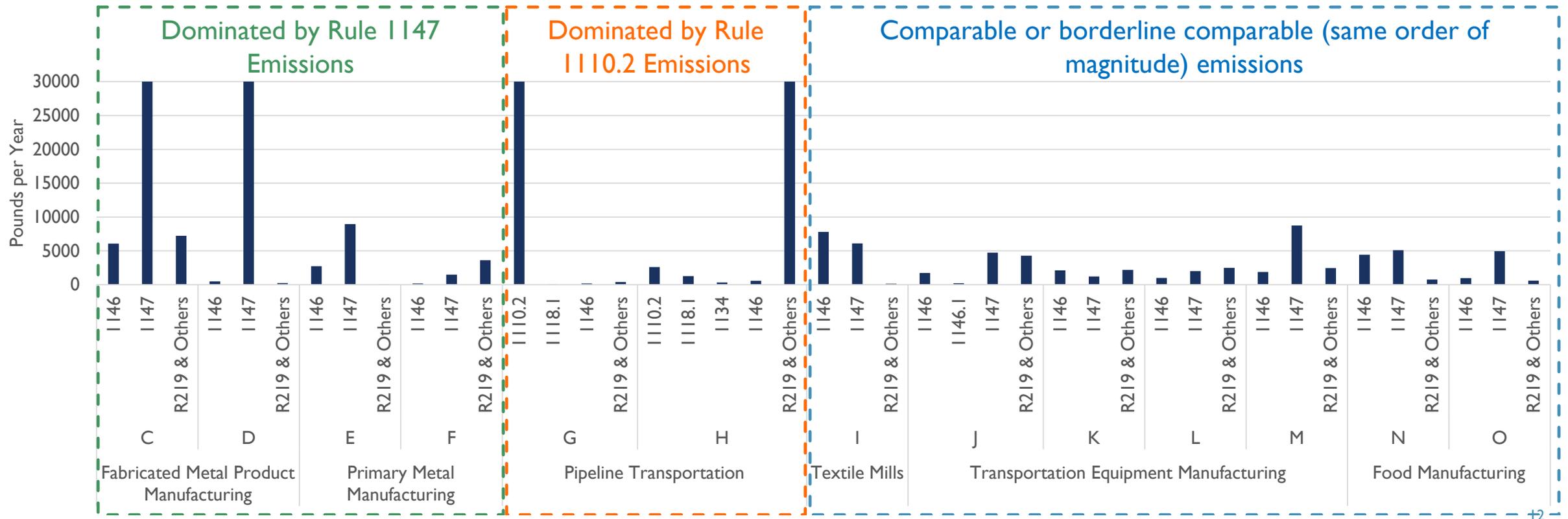
Pieces of Equipment Subject to Other Landing Rules per Facility



*Excludes Rule 1470 equipment

Emissions from Facilities with more than 10 Other Units

NOx Emissions from RECLAIM Facilities in Year 2016



- This information may drive the Rule 1100 schedule for these facilities

Recommendations for PARs 1146 and 1146.1

- ❑ Maintain existing NO_x concentration limits (emission limits still represent BARCT)
- ❑ Defer Compliance for units between 2-20 MMBtu/hr if:
 - Unit can demonstrate that NO_x 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)
 - Staff proposes to maintain this provision for RECLAIM facilities
- ❑ Implementation schedule will be specified in Proposed Rule 1100

Recommendations for PAR 1146.2

- ❑ No changes to NO_x concentration limit at this time, will revisit later (post transition)
- ❑ 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
 - Avoids need to install an intermediate technology that would be obsolete upon future amendment to Rule 1146.2
- ❑ The provision to require RECLAIM facilities to submit a one-time inventory of Type II units (> 400,000 Btu/hr up to and including 2 MMBtu/hr) is removed
 - Staff will revise Rule 222 to include units between 400,00 Btu/hr and 1 MMbtu/hr

Recommendations for Proposed Rule 1100

- ❑ Group equipment of different sizes together to allow for flexibility & ensure achievement of greatest emission reductions early
 - Group all equipment subject to Rule 1146 and Rule 1146.1
- ❑ 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
 - Revised to allow “credit” for units that are already at BARCT
 - Implementation timeframe is the same
 - 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 6 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)

Recommendations for Monitoring, Reporting & Recordkeeping Requirements

- ❑ Concerns for RECLAIM specific MRR
 - Some measurements are used for mass emission calculations only
 - More stringent reporting requirements
- ❑ Assessed MRR taking into consideration RECLAIM and MRR in 1146 series
- ❑ Initial staff recommendations:
 - Title V facilities
 - NSR public process triggered by modifications on monitoring and recordkeeping
 - Maintain RECLAIM MRR approach; possible flexibility in changes to reporting requirements and missing data provisions
 - Non-Title V, major sources
 - Maintain CEMS but use MRR in source-specific rules
 - Non-Title V, non-major sources
 - Use MRR in source-specific rules

Rule Schedule

- Nov 2017 – Mar 2018 Working Group Meetings
- Feb 14, 2018 Public Workshop & CEQA Scoping Meeting
- Feb 28, 2018 Close of Public Comments
- Mar 16, 2018 Stationary Source Committee
- Apr 6, 2018 Set Hearing
- May 4, 2018 Public Hearing

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