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)

<table>
<thead>
<tr>
<th>Rule</th>
<th>Applicability</th>
<th>Size</th>
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</thead>
<tbody>
<tr>
<td>Rule 1146</td>
<td>Boilers, steam generators, and process heaters</td>
<td>≥ 5 million Btu per hour</td>
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<tr>
<td>Rule 1146.1</td>
<td>Boilers, steam generators, and process heaters</td>
<td>&gt;2 and &lt;5 million Btu per hour</td>
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<tr>
<td>Rule 1146.2</td>
<td>Natural gas-fired water heaters, boilers, and process heaters</td>
<td>≤ 2 million Btu per hour</td>
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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

![Pie chart showing distribution of Rule 1146 and 1146.1 equipment in RECLAIM](chart.png)

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

- Staff believes that facilities with 7 or less units can meet the NOx 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-compliant 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 NOx concentration limits within 3.5 years
  - Facility A – 19 R1146 units (5-20 MMBluhr)
  - Facility B – 4 R1146 units (5-20 MMBluhr) and 7 R1146.1 units
  - Facility C – 2 R1146 units (20-75 MMBluhr) 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 NOx burners

![Bar chart showing number of non-compliant pieces per facility](chart.png)
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 NOx 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

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Emissions from Facilities with more than 10 Other Units

- This information may drive the Rule 1100 schedule for these facilities
Recommendations for PARs 1146 and 1146.1

- Maintain existing NOx concentration limits (emission limits still represent BARCT)
- Defer Compliance for units between 2-20 MMBtu/hr if:
  - Unit can demonstrate that NOx 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 NOx 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

## Contacts

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