NOx RECLAIM WORKING GROUP MEETING

FEBRUARY 14, 2019
SCAQMD
DIAMOND BAR, CA

Agenda

- Landing Rule Updates
  - PAR 1134
  - PAR 1110.2
  - PR 1109.1
  - PAR 113
- New Source Review
  - Summary Key Issue #1
  - Summary Key Issue #2
  - Discussion of Key Issue #3 – Ensuring Sufficient Offsets
Command-and-Control BARCT Rulemaking Status

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<tr>
<th>PAR 1134</th>
<th>PAR 1110.2</th>
<th>PR 1109.1</th>
<th>PR 113</th>
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<td><strong>Gas Turbines</strong>&lt;br&gt;• Public Workshop held November 2018&lt;br&gt;• Stationary Source Committee Meeting February 15, 2019&lt;br&gt;• Public Hearing April 2019</td>
<td><strong>Gaseous- and Liquid-Fueled Engines</strong>&lt;br&gt;• Ongoing site visits&lt;br&gt;• Sent survey questionnaire&lt;br&gt;• Public Workshop 1st Quarter 2019&lt;br&gt;• Public Hearing 3rd Quarter 2019</td>
<td><strong>Refineries</strong>&lt;br&gt;• Reviewing three proposals for third party verification&lt;br&gt;• Contractor selection April Board Meeting&lt;br&gt;• Working Group Meeting #6 held on Jan. 31, 2019&lt;br&gt;• Public Hearing Oct. 2019</td>
<td><strong>Monitoring, Reporting, and Recordkeeping (MRR)</strong>&lt;br&gt;• Integrated MRR requirements&lt;br&gt;• Former RECLAIM&lt;br&gt;• Possibly non-RECLAIM&lt;br&gt;• Initiated preliminary analysis&lt;br&gt;• Conducted five site visits&lt;br&gt;• Public Hearing Oct. 2019</td>
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UPDATE ON NEW SOURCE REVIEW

Guiding Principles and Areas of General Agreement

- New and modified sources in RECLAIM must comply with Rule 2005 – New Source Review for RECLAIM
- New and modified sources outside of RECLAIM must comply with Regulation XIII – New Source Review
  - BACT is required for all new and for modified sources with an emission increase
  - Regulation XIII will apply to the first modification post-RECLAIM
- The transition of a facility from RECLAIM to command-and-control is not a NSR event
Summary Three NSR Issues

Key Issue #1
For new sources that are permitted in RECLAIM, what are the offset obligations as facilities transition out of RECLAIM?

Key Issue #2
When and how pre-modification potential to emit (PTE) is calculated to determine if an emission increase occurs that triggers NSR after facilities transition out of RECLAIM?

Key Issue #3
How will the SCAQMD ensure that sufficient offsets are available to satisfy NSR requirements?

Key Issue #1 Summary (November 8 Working Group Meeting)

- NSR requirements for RECLAIM facilities
  - Facilities that were permitted after the start of RECLAIM and facilities with emission increases above their starting allocation have ongoing holding requirements to hold RTCs equal to their PTE year-to-year
  - Facilities that existed at the start of RECLAIM only have to hold RTCs equal to their PTE for the first year
- NSR obligations for RECLAIM facilities after transitioning
  - Rule 2005 only has an ongoing holding requirement for some facilities
    - Equivalency to SIP commitment can be demonstrated programmatically
  - RECLAIM NSR does not have an ongoing offsetting requirement
    - Rule 2004 requirement to have sufficient RTCs for reconciliation of actual emissions is not an NSR requirement and will not be an ongoing obligation after RECLAIM
Key Issue #2 Summary
(December 13 & January 10 Working Group Meetings)

- Regulation XIII will apply to the first modification post-RECLAIM
- Purpose of calculating a pre-modification PTE is to determine if there is an emissions increase, if so need
  - BACT
  - Offsets
  - Modeling
- Pre-modification PTE needs to be calculated in lbs/day
  - Hierarchy of methodologies will be used to calculate
  - Pre-NSR equipment based on existing Regulation XIII approach (2-year average)

After facilities transition out of RECLAIM, when and how will a pre-modification PTE be calculated to determine if NSR requirements are triggered?

KEY ISSUE #3
### Summary of Three Key NSR Issues

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<td>For new sources that are permitted in RECLAIM, what are the offset obligations as facilities transition out of RECLAIM?</td>
<td>For permits issued without a NOx PTE, when and how will a baseline be established to determine if an NSR event occurs after facilities transition out of RECLAIM?</td>
<td>How will the SCAQMD ensure that sufficient offsets are available to satisfy NSR requirements?</td>
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### Regulation XIII – Purpose and Background

- Ensure facility operations do not interfere with the progress of attainment, and that future economic growth is not unnecessarily restricted
- When a facility applies for a new or modified source, it will be subject to Regulation XIII
- Regulation XIII requires offsets for any permitting action that results in an emission increase $\geq 1$ lb/day of any nonattainment air contaminant
Possible Consequences if Offsets are Not Available

- If offsets are not available, permits cannot be approved
  - Facility modernization of equipment that meets BACT can be hindered
  - Facilities cannot expand to meet economic demand
  - Can impact regional economy if facility operations are limited or halted
- Limited generation of opportunities
  - Majority of ERCs are generated from shutdowns
    - Incentivizing facilities to shut down equipment to generate ERCs is undesirable
  - Difficult to generate ERCs from over control due to rule-required calculation methodology and BACT discounting

Framing Key Issue #3

- Under Regulation XIII, if facilities transition out of RECLAIM the only source of offsets is the open market
- Two main questions:
  - Question 1: Can the open market support facilities that transition out of RECLAIM?
  - Question 2: If there are not sufficient offsets in the open market, what are possible options?
Question 1: Can the open market support facilities that transition out of RECLAIM?

- Staff Response: The open market cannot support the estimated demand from RECLAIM facilities for future NSR events
  - Insufficient ERCs
    - Supply in the open market
    - Possible demand for ERCs
  - Limited availability

ERCs in the Open Market

- Amount of open market ERCs has been on a downward trend for the previous ten years
- Very little change in the previous three years
- Total available NOx ERCs in the open market: ~800 lbs/day

*ERC reduction in 2012 was for a Permit to Construct issued in 2011. The unused ERCs were re-issued to the facility in 2014, pursuant to Rule 1309(g), after the permit was cancelled

Possible NOx Offset Demand from RECLAIM

- New facilities (entered after inception of RECLAIM)
  - RTC hold required at the beginning of each compliance period
  - Amount of RTCs is equal to the post-modification PTE (i.e. pre-modification PTE = zero)
- Existing facilities (in RECLAIM at its inception)
  - RTC hold required only for the first year of operation
  - Amount of RTC hold equals increase in emission, not post-modification PTE
- Emission increases during the 5 year period from 2011–2015
  - Average annual: ~1,000 lbs/day
  - Maximum annual: ~2,500 lbs/day

Insufficient ERCs - Open Market Challenge

- Amount of ERCs in the open market is not sufficient to satisfy the RECLAIM demand
  - Average RECLAIM demand (1 year) > Total ERCs in open market
  - Supply of ERCs in the open market could be consumed in one year
- Possible average annual debit for RECLAIM: ~1,000 lbs/day*
- Quantity is greater than the 800 lbs/day available in the open market

* Annual RECLAIM demand based on new facilities and existing facilities with new or modified sources.
Limited Availability of ERCs in the Open Market

- Not all ERCs in the open market are available for sale
  - Facilities may want to hold on to ERCs for future business growth
  - Facilities held on to ERCs even during peak price in 2009 ~$400,000 tpy
- Availability is further limited by the small universe of ERC holders
  - ERCs are owned by a total of 21 facilities
  - 6 facilities hold 90% of ERCs

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<tr>
<th>Owner</th>
<th>ERCs (lbs/day)</th>
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<tr>
<td>PACIFIC L.A. MARINE TERMINAL LLC</td>
<td>500</td>
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<tr>
<td>WEBER METALS INC</td>
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<tr>
<td>UCLA</td>
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<tr>
<td>VA GREATER LOS ANGELES HEALTHCARE SYS</td>
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<td>US GOVT, AIR FORCE DEPT, MARCH AFB</td>
<td>25</td>
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<tr>
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*Coastal ERCs in the open market February 2018

Summary and Recommendation for Question 1

- Former RECLAIM facilities would be allowed to use ERCs in the open market
- Additional source of offsets is needed to support the anticipated demand as facilities transition out of RECLAIM

- ERCs in the open market total approximately 800 lbs/day
- Estimated RECLAIM demand is 1,000 lbs/day
- Few facilities hold the majority of ERCs
- These facilities may hold their ERCs for own growth
- Limited trading would make it difficult for RECLAIM facilities to obtain ERCs
- Open market cannot sustain a one year demand from RECLAIM facilities
Question 2: If there are not available offsets in the open market, what options are being considered?

Possible sources of offsets for former RECLAIM facilities

- Open Market
- SCAQMD Internal Bank
- SCAQMD Internal Bank

SCAQMD Internal Bank

- SCAQMD’s internal bank provides offsets for
  - Rule 1309.1 facilities (i.e. essential public services) through the Priority Reserve
  - Rule 1304 facilities exempt from offsetting (i.e. NOx PTE less than 4 tons per year)
- Offsets in the internal bank generated mostly from orphan shutdowns
  - Emission reductions from sources that shutdown but did not apply for emission reduction credits (ERCs)
NOx Offsets in the SCAQMD Internal Bank

- SCAQMD internal bank currently has >40,000 lbs/day of NOx offsets
- Offsets are SIP approved
  - Real
  - Permanent
  - Enforceable
  - Quantifiable
  - Surplus (discounted annually to BARCT)
- Sufficient NOx offsets in the internal bank to “seed” Large NOx Source Internal Bank

Rule 1315 (g) Thresholds for Internal Bank – Purpose and Implications

- Rule 1315 (g) establishes annual thresholds for use of offsets from the internal bank
  - Purpose of thresholds is to ensure net emission increases do not exceed the maximum emissions analyzed in the CEQA document
  - Analysis included sources that would be eligible to receive permits under Rule 1309.1 and Rule 1304
  - Thresholds were established based on the net emission increases according to the projected growth in the 2007 Air Quality Management Plan (AQMP)
- If annual threshold is exceeded
  - Offsets cannot be issued from the internal bank – permit moratorium
  - To resume issuing offsets from the internal bank, the cumulative net emission increase must be 10 percent below the corresponding threshold
Demonstration of Rule 1315 (g) Table B NOx Thresholds

- Table B thresholds are established from 2011 to 2030 for all five criteria pollutants (VOC, NOx, SOx, CO, and PM10)
- Comparison to annual thresholds is based on minor and major Rule 1309.1 and 1304 facilities that obtain offsets from the Internal Bank
- Net emission increases are calculated according to the cumulative increases and decreases from prior years
- Annual cumulative increases and decreases are reported in the SCAQMD’s Regulation XIII Annual Status Report

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<tr>
<th>Year</th>
<th>NOx</th>
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<tr>
<td>2012</td>
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<tr>
<td>2030</td>
<td>1.96</td>
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Summary of Cumulative Net Emission Increases/Decreases Since 2011

- Since 2011, the annual cumulative net emission increase has been negative – more emission decreases than increases
  - Annual threshold has never been exceeded
- 2016 cumulative net emission increase for NOx is -2.58 tons/day
  - A total of 3.19 tons/day below the threshold
Considerations of SCAQMD Internal Bank NOx Thresholds

- If RECLAIM facilities were to use the internal bank, may need to reevaluate NOx thresholds
  - Thresholds were based on Rule 1309.1 and 1304 facilities
  - 2018 threshold is 0.76 tons per day
  - The projected 2018 cumulative emission increase and decrease is 2.06 tons/day below the threshold
- Potential demand for offsets from RECLAIM facilities could be 2,500 lbs/day (1.25 tons/day) (Slide 17)
- Significant repercussions if an annual threshold is exceeded – permit moratorium

Concept for Large NOx Source Internal Bank

- Establish a Large NOx Source Internal Bank for all former RECLAIM facilities and other facilities with a NOx PTE greater than 4 tons/year
- This second internal bank:
  - Provides assurance of a sufficient supply of offsets for Rule 1309.1 and 1304 facilities
  - Maintains existing thresholds for SCAQMD Internal Bank for Rule 1309.1 and 1304 facilities
  - Likely to require NOx offset thresholds – would be specific to sources accessing the bank
Concept for Large NOx Source Internal Bank

(Continued)

Seeding the Large NOx Source Internal Bank

• Offsets from SCAQMD Internal Bank
• Possible RTC conversion to ERCs

Offset Generation

• Generation of offsets from Large NOx Sources (PTE > 4 tons/year) would go back to the Large NOx Source Internal Bank

Access

• All former RECLAIM would have access
  • Includes small RECLAIM emitters (NOx PTE less than 4 tons/year)
  • Access will also be given to all other sources that are not eligible to use the existing internal bank per Rules 1304 and 1309.1
  • These facilities would have been in RECLAIM had the program continued

Fees

• All facilities would pay fees to obtain offsets
Large NOx Source Internal Bank – Next steps

- Determine the amount of offsets needed to seed the bank
  - Analyze the sustainability of SCAQMD Internal Bank and Large NOx Source Internal Bank
  - Can a portion of RTCs help seed the bank?
- New CEQA analysis may be required for the new internal bank
- Need to establish fee

Alternative Option – Retain Rule 2005

- Maintain RECLAIM NSR pursuant to Rule 2005
- Continue using RTCs to satisfy RECLAIM NSR requirements
- Would eliminate baseline issues, offset supply issues, and concerns about backsliding
- Generation of RTCs would be based on shutdowns
- RECLAIM facilities would have to reconcile emissions
Summary

- Insufficient offsets in the open market to meet the demand for RECLAIM after the transition
- SCAQMD Internal Bank has sufficient offsets to supply RECLAIM facilities
- Offsets in SCAQMD Internal Bank can seed a new Large NOx Source Internal Bank
  - Former RECLAIM facilities will have access to the new internal bank
  - Fee for use
- Alternative options still being considered (e.g., retaining Rule 2005)

NSR – Process Moving Forward

Continuing discussions with USEPA regarding RECLAIM NSR transition

- Ensure all NSR, AQMP, and CAA requirements will be met after sunset of RECLAIM program
- Resume weekly calls with EPA
  - Past cancellations due to government shutdown
  - Prior discussions focused on Key Issue #1
  - Last conference call focused on Key Issue #2
- Face-to-face meeting for more extensive discussions tentatively scheduled for March

RECLAIM Working Group Meetings

- Monthly working group meetings focused on NSR
- Continued discussions with stakeholders

Updates to Stationary Source Committee (SSC)

- Quarterly presentation with quarterly RECLAIM update
- Monthly written report
## Contacts

### General RECLAIM Questions

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<tr>
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### New Source Review

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### Proposed Rule 1109.1

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### Proposed Amended Rule 1134

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Rules 1146, 1146.1, 1146.2

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