DECEMBER 3, 2020
SOUTH COAST AQMD
MEETING ID: 971 6506 4075
PASSCODE: 175594
TELECONFERENCE: (669) 900-6833
Agenda

- Highlights from Working Group #1
- Information Gathered Since Last Working Group
- Virtual Site Visits
- Applicability Considerations
- Next Steps
Previous Working Group Meeting Recap

- Discussed the criteria for inclusion in PR 1147.1
  - Type of facilities
  - Applicable equipment within the facility
- Discussed the BARCT and rule development process
- Discussed virtual site visits in lieu of a physical visit due to COVID-19
Virtual Site Visits

- COVID-19 Pandemic changed ability to conduct face-to-face site visits
- Facility operators were willing to provide such virtual site visits in real time
Virtual Site Visits

Sully-Miller (Sun Valley)  
7/22/2020

All American Asphalt (Westminster)  
8/18/2020

3M Company (Corona)  
9/11/2020
The visit began at a rotary dryer that removes moisture from aggregate and is heated by the originally installed burner.

The same type of aggregate dryer is used in another area of the site.

According to facility representative, asphalt is transported hot within 45 minutes of the site.

The facility representative indicated air flow would likely be increased and would require larger air handling for a burner replacement.

Two of the originally installed burners are still working at the site.
All American Asphalt (Westminster)

- The operator provided a virtual site visit tour using a videographer and a cell phone while narrating.
- Identified offloading of recycled asphalt pavement and then continued the tour pointing out the various equipment and processes.
- Information provided to staff during the tour included:
  - Burner types and sizes
  - Burner flame temperatures, and
  - NOx emission monitoring systems at Corona Plant.
This aggregate facility produces roofing granules of various colors and sizes

Step 1 involves drying, crushing, and screening quarry rocks

Step 2 involves adding a ceramic color coating prior to consolidation into various colors of decorative roofing stone

This location is the only west coast distributor of cool granules which reduces heat through reflection

Three other plants are in the mid-west and east coast
Virtual Site Visits (cont.)

Fontana Paper Mill (Fontana) 9/17/2020

Los Angeles City Asphalt Manufacturing (Los Angeles) 10/8/2020

Lapeyre Industrial Sands (San Juan Capistrano) 11/5/2020
Fontana Paper Mill (Fontana)

- Facility produces tarpaper from recycled paper for roofing industry
- Dryer is not used with aggregate material
- Limestone is added to asphalt as a coating for the paper
- Although facility incorporates the use of sand and limestone, it is not applicable to aggregate facilities
In 2019, City of Los Angeles re-commissioned its previous asphalt plant with new equipment, including an ultra-low NOx burner.

Source test data validates burner emission concentrations less than 25 ppmv.

Goal was to incorporate 50% Recycled Asphalt Pavement (RAP).

Plant handles between 200 – 700,000 tons of Hot Mix Asphalt.
Lapeyre Industrial Sands

- Two fluidized bed dryers used to produce industrial sands
- Dryers are refractory brick lined for thermal protection
- Dryer temperatures are kept below 1200 degrees Fahrenheit
- Only one of the fluidized bed dryers operates at a time and one is strictly back-up
Applicability Considerations

- Staff identified 33 facilities related to the aggregate industry representing 92 pieces of equipment.
- Since NOx BARCT emission limits have been recently revised for boilers and heaters regulated under Rules 1146 and 1146.1, these units would not be included under Proposed Rule 1147.1.
- Staff focused on the remaining equipment which are currently regulated under Rule 1147 – NOx Reductions from Miscellaneous Sources.
Rule 1147 establishes NOx emission limits for a variety of external combustion sources.

There are seven equipment categories at aggregate facilities that are regulated under Rule 1147 facilities:

- Afterburners
- Furnaces
- Kilns
- Mixers
- Ovens
- Dryers
- Asphalt Manufacturing
Rule 1147 did not define equipment that is covered under “asphalt manufacturing operations”

Based on an evaluation of equipment at aggregate facilities, the only equipment category covered under “asphalt manufacturing operations” is dryers operated under 1,200 °F

- Current NOx emission limit for asphalt manufacturing operations (dryers < 1,200 °F) is 40 ppm

Rule 1147 includes a separate category for dryers that establishes different NOx limits that are < 1,200 °F and ≥ 1,200 °F

- Aggregate facilities with dryers < 1,200 °F are addressed under “asphalt manufacturing operations”
- Aggregate facilities with dryers ≥ 1,200 °F are addressed under the dryer category and are required to meet a NOx emission limit of 60 ppm
### SUMMARY OF RULE 1147 EQUIPMENT AT AGGREGATE FACILITIES

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afterburner</td>
<td>4</td>
</tr>
<tr>
<td>Furnace</td>
<td>5</td>
</tr>
<tr>
<td>Kiln</td>
<td>9</td>
</tr>
<tr>
<td>Mixer</td>
<td>2</td>
</tr>
<tr>
<td>Oven</td>
<td>1</td>
</tr>
<tr>
<td>Dryers ≥ 1,200 °F</td>
<td>2</td>
</tr>
<tr>
<td>Dryers &lt; 1,200 °F (Asphalt Manufacturing Operations)</td>
<td>51</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>74</strong></td>
</tr>
</tbody>
</table>

![Number of Rule 1147 Units at Aggregate Facilities](image-url)
Staff has initiated rule development to amend Rule 1147 to update the NOx BARCT emission limits.

- Most equipment at aggregate facilities are being addressed in Proposed Amended Rule 1147 with the exception of “Asphalt Manufacturing Operations.”

- Since the only equipment category under “Asphalt Manufacturing Operations” is dryers < 1,200 °F, staff is recommending to:
  - Complete the BARCT analysis for Asphalt Manufacturing Operations under the Proposed Amended Rule 1147
  - Keep Asphalt Manufacturing Operations under Rule 1147
  - No longer pursue a separate rulemaking for equipment at aggregate facilities

### Equipment

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number of Units</th>
<th>Applicable Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afterburner</td>
<td>4</td>
<td>Rule 1147</td>
</tr>
<tr>
<td>Furnace</td>
<td>5</td>
<td>Rule 1147</td>
</tr>
<tr>
<td>Kiln</td>
<td>9</td>
<td>Rule 1147</td>
</tr>
<tr>
<td>Mixer</td>
<td>2</td>
<td>Rule 1147</td>
</tr>
<tr>
<td>Oven</td>
<td>1</td>
<td>Rule 1147</td>
</tr>
<tr>
<td>Dryers</td>
<td></td>
<td>Rule 1147</td>
</tr>
<tr>
<td>Dryers ≥ 1,200 °F</td>
<td>2</td>
<td>Rule 1147</td>
</tr>
<tr>
<td>Dryers &lt; 1,200 °F (Asphalt Manufacturing)</td>
<td>51</td>
<td>Rule 1147.1</td>
</tr>
</tbody>
</table>
Next Steps

Hold one more Proposed Rule 1147.1 Working Group Meeting to discuss BARCT Analysis

Transition rulemaking into Proposed Amended Rule 1147
SOUTH COAST AQMD CONTACTS

General RECLAIM Questions

• Susan Nakamura, Assistant Deputy Executive Officer
  909-396-2282
  snakamura@aqmd.gov

• Michael Morris, Planning & Rules Manager
  909-396-3282
  mmorris@aqmd.gov

• Gary Quinn, P.E.
  Program Supervisor
  909-396-3121
  gquinn@aqmd.gov

Proposed Amended Rules 1147 and 1100

• Shawn Wang
  Air Quality Specialist
  909-396-3319
  swang@aqmd.gov

• Gary Quinn, P.E.
  Program Supervisor
  909-396-3121
  gquinn@aqmd.gov

Proposed Rule 1147.1

• Steve Tsumura
  Air Quality Specialist
  909-396-2549
  stsumura@aqmd.gov

• Gary Quinn, P.E.
  Program Supervisor
  909-396-3121
  gquinn@aqmd.gov