

Proposed Rule 1118.1 - Control of Emissions from Non-Refinery Flares

Working Group Meeting #1

August 25, 2017

SCAQMD Headquarters – Conference Rm CC2
Diamond Bar, California

2016 AQMP – CMB-03

- Non-Refinery Flare emission reductions by 2031
 - 1.5 tons per day (tpd) NO_x
 - 0.4 tpd VOC
- Potential Requirements or Incentives for Beneficial Use
- Currently Available Low-NO_x Flares
 - Certified Ultra-Low Emissions Burner (CEB®)
 - Potential Retrofit

Inventory

- 260 flares from 128 facilities
- Emission Estimates:
 - **2016 AQMP - 2.3 tpd**
 - 2012 Annual Average
 - **AER - 0.6 tpd**
 - 2015 reported annual emissions
 - 73 facilities reported
 - Only facilities with annual emission of 4 tons or greater
 - **Potential to emit from permits ~ 5.9 tpd**

Site Visits



- **Site Visits to Date**
 - Two Landfills
 - Two Wastewater Plants
 - Four Oil & Gas Operations
- **Observations**
 - Each Flare is Different
 - Each facility has unique challenges/opportunities

Oil and Gas Flares



Opportunities:

- Greatest number of flares
- Less gas cleanup needed for beneficial use
- Many facilities already utilize gas for beneficial use

Challenges:

- Economics - low oil/fuel prices
- No credits available (LCFS, etc.) as these are for renewable sources

Wastewater Treatment

Opportunities:

- Already prioritize beneficial use
- Food waste potentially will increase gas production

Challenges:

- Gas Clean-up costs
 - Siloxanes
- Low overall emissions



Landfills

Opportunities:

- Large source of gas
- On-going growth

Challenges:

- Gas quality/quantity
 - Aging/shutdown landfills
- Gas clean-up
 - Siloxanes
 - Oxygen and Nitrogen
- BTU Content



Universe of Flares

Continuous *

- Operates 24/7
- Monthly Tests
- Source Testing
- Pollution Control
- Emissions Monitoring

Emergency/Standby

- Normally Not Running
- Event Starts Flare
- Source Testing
- Relief System
- Pollution Control

Backup

- Full Capacity Capability
- Occasional Testing

* *Primary focus of rule*

Applicable Existing Rules

Rule 1150.1 - Control of Gaseous Emissions from Landfills



Rule 1303 – NSR Requirements

- BACT NO_x Requirement (new or modified flares)
- Biogas – 0.025 lb/MMBtu
- Landfill gas – 0.025 lb/MMBtu
- Oil and gas – 0.018 lb/MMBtu



PR1118.1 – Preliminary Findings

OPPORTUNITIES

- Pipeline Injection
- Transportation Fuel
- Bio-fuel use On-Site/Off-site
- Energy Production On-Site/Off-Site
- Clean Flare Technology
 - CEB®
 - Retrofits

CHALLENGES

- Pipeline Purity Requirements
- Cost of Gas Cleanup
- New Pipeline Costs
- Petroleum Market Flux
- Legislative Roadblocks
- Long Term Renewable Credit Pricing

Discussion



- Any further opportunities?
- Operator concerns/challenges?
- Need for technology/flare alternative evaluation
- Rule considerations:
 - New facilities
 - Existing facilities
 - Facility types
 - Control
 - Cost effectiveness
 - Tiered/timed approach
 - De minimis use

Timeline

- Meetings every 6 weeks
- More site visits
- Targeting Governing Board adoption hearing in Spring 2018



CONTACT INFORMATION



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