

PR 1410 Working Group Meeting #4

AUGUST 2, 2017

SCAQMD Headquarters
Diamond Bar, California



SCAQMD Activities Since Last Working Group Meeting

- SCAQMD staff met with TORC on June 7 and 28, 2017 to further discuss confidential MHF information
 - TORC explained derivation of Airborne Reduction Factor (ARF), important parameters for ARF, etc.
 - Staff requested supplemental information
- Staff met with TORC on July 25, 2017 regarding costs data for conversion to sulfuric acid catalyst technology
 - ~\$600 MM (BMcD estimate) for 30,000 BPD alkylate, specific to TORC
 - New grassroots alkylation unit (DuPont's SA alkylation technology)
 - Regeneration plant cost is extra

Today's Working Group Meeting

- Working Group Meetings #2 and #3 presentations (*on the PR 1410 website*) covered:
 - ❑ Background
 - ❑ API 751 recommendations
 - ❑ Initial concepts for active and passive mitigations, inspections and audits
- Presentation today will focus on:
 - ❑ Proposed Rule Concept
 - ❑ Proposed Interim Control Measures (“Enhanced” Mitigation)
- Staff is soliciting comments on proposed rule concept and interim control measures

Findings from MHF Alkylation Technology

- Mobil conducted experiments (small- and large-scale) and comparative modeling from which ARF was calculated
- Based on information from TORC, ARF is a measure of “rainout” MHF in the event of a MHF leak
 - ❑ 50% ARF when combined with MHF chemistry
 - ❑ Vapor barriers provide an 89% ARF when combined with MHF chemistry
- Staff concerned with information provided by TORC
 - ❑ Could not locate an experiment based on all current operating conditions (pressure, temperature, weight % HF)
 - ❑ Reliance on MHF vapor barriers (e.g., flange shrouds, settler pans, pump seals) functioning
 - ❑ Based on information received to date, insufficient evidence that a dense vapor cloud does not form

Necessity of Phase Out MHF Technology

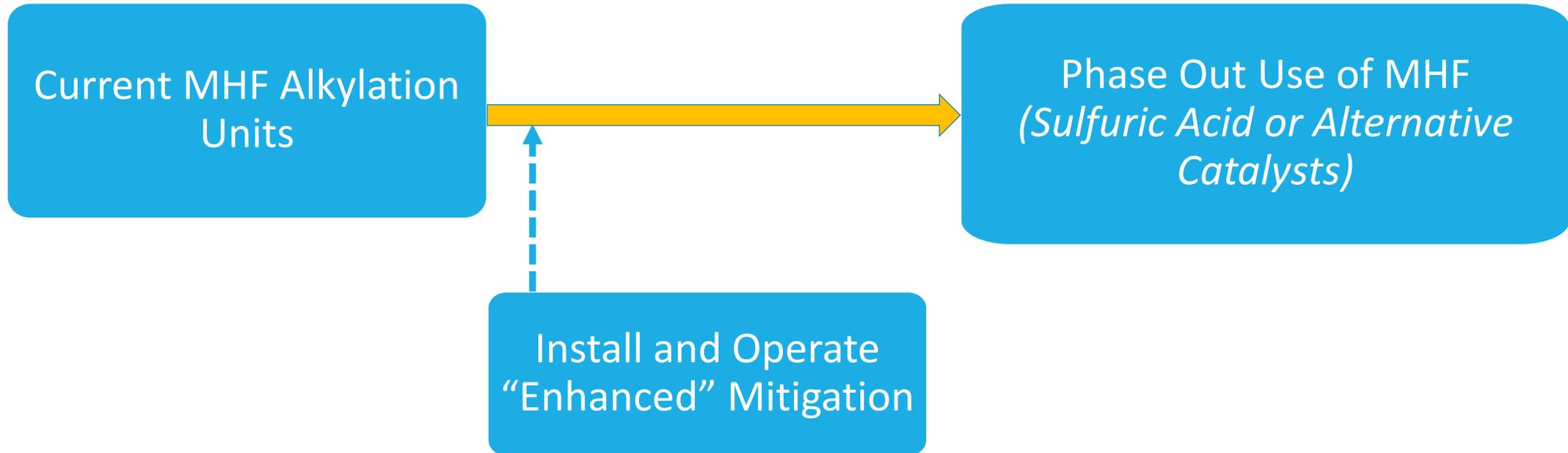
- Staff initial conclusion is that the testing/modeling information provided by TORC did not sufficiently demonstrate MHF would not flash atomize and form dense HF cloud
- Even existing mitigations do not guarantee adequate protection in the unplanned event such as a major accident or earthquake causing equipment failure
 - ❑ Barrier breach
 - ❑ Loss of power
 - ❑ Lack of water or water pressure
- A release of MHF has the potential to cause health risks to a significant number of persons
- A phase out of the use of HF is a preemptive measure to prevent an air pollution episode
- Implementing enhanced mitigation in the interim prior to a phase-out can minimize potential health risks caused by a release of MHF

SCAQMD's Regulatory Authority to Regulate Hydrogen Fluoride (HF)

- “[L]ocal and regional authorities have the primary responsibility for control of air pollution from all sources, other than emissions from motor vehicles.” California Health and Safety Code § 40000.
- “[R]ules and regulations may . . . provide for the prevention and abatement of air pollution episodes which, at intervals, cause discomfort or health risks to, or damage to property of, a significant number of persons or class of persons.” California Health and Safety Code § 40001(b).
- SCAQMD has the authority to adopt a rule to phase out the use of MHF. *Ultramar, Inc. v. South Coast Air Quality Management District*, 17 Cal. App. 4th 706-12 (1993). “[T]he Legislature clearly intended to vest AQMD with the authority to adopt preemptive measures designed to prevent air pollution episodes . . .” *Id.* at 707.

Initial Concept for PR 1410

(Seeking input on timeframe)



Implementation Timeframe

- Seeking input on implementation timeframe for enhanced mitigation measures and phase-out of MHF
- Enhanced Mitigation Measures
 - ❑ Implementation time period is dependent on type of mitigation measure
 - ❑ Some measures may take longer to implement
- Phase-out of MHF
 - ❑ Considerations needed for engineering, design, permitting/CEQA, logistics, removal, construction, delivery, installation, and performance testing
 - ❑ Maturation of alternative technologies may be a consideration

Enhanced Interim Control Measures

- Enhanced interim control measures would be required when using MHF until transitioned to alternative catalyst
- Purpose of interim control measures is to:
 - ❑ Seek enhanced safety improvements in the use of MHF
 - ❑ Ensure all safety measures in place
 - ❑ Minimize off-site impacts from a potential release of MHF
- Incorporating interim control measures in PR 1410 ensures facilities adhere to API recommended practices and additional PR 1410 requirements

Proposed Enhanced Mitigation

- Beyond the current mitigation efforts
 - ❑ HF Detection Systems
 - ❑ Water Mitigation Systems
 - ❑ Physical Mechanisms
 - ❑ Uninterruptible power and water supply
 - ❑ Procedures/Training
 - ❑ Inventory Control
 - ❑ Inspections/Safety Audits
- More automatic activation – *make active mitigation more passive*
 - ❑ Water Mitigation Systems
 - ❑ Emergency Block Valves
 - ❑ Acid Transfer/Evacuation System

Upcoming SCAQMD Activities

- Release preliminary draft rule language before next Working Group Meeting to solicit feedback
- Prepare preliminary draft staff report
- Arrange meetings between alternative alkylation technology manufacturers and refineries to discuss commercial feasibility, transition time and costs
- Obtain any other available detailed conversion cost data
- Next working group meeting in September 2017

Schedule

Activity	Current Target Date
PR 1410 Working Group Meeting #4 (SCAQMD)	August 2, 2017
PR 1410 Working Group Meeting #5 (Torrance)	September 2017
Release of CEQA Notice of Preparation/Initial Study	September 2017
Public Workshops/CEQA Scoping Meeting	September 2017
Release of CEQA Draft EIR	October/November 2017
SCAQMD Refinery Committee Meeting	October/November 2017
Governing Board consideration of PR 1410	December 2017

NOTE: Additional Working Group meetings as needed

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