



Torrance Refinery Action Alliance

Philip Fine, Ph.D.
SCAQMD Deputy Executive Officer
21865 Copley Drive. Diamond Bar, CA 91765

March 14, 2018

Dear Dr. Fine:

I write on behalf of the Torrance Refinery Action Alliance (TRAA) to offer our help and support with SCAQMD staff's efforts to perform a scientific assessment of modified hydrofluoric acid alkylation.

At the first PR 1410 working group meeting, senior staff explained that MHF must be proven safer than HF or else the SCAQMD would assume it is no safer. This is eminently reasonable. MHF is used today solely by virtue of strong safety claims: 90% safer than HF and 24 times safer than sulfuric acid. Our region realized nearly 30 years ago that HF alkylation is too dangerous to use in LA County. Likewise, MHF alkylation must be phased out if those safety claims remain unproven.

The SCAMQD has been given behind closed doors access to proprietary MHF information, granted undeserved trade secret rights. Our public records request for that information remains unanswered, keeping the community in the dark. ToRC knows that time-pressed AQMD staff members will find it difficult to systematically evaluate a huge number of documents. ToRC adds to the difficulty by making confusing new claims for previously undocumented tests.

Fortunately, MHF scientific claims and physical characteristics are well documented. A straightforward application of chemistry proves MHF's airborne hazard is equivalent to HF's. Furthermore, all documented tests confirm our assessment. Dr. George Harpole's vapor pressure curves are verified by precisely matching MHF test data. TRAA's Science Panel has prepared a new MHF briefing laying out our scientific assessment in parallel with the industry's claims and evidence, step by step. Please allow us to present this to AQMD staff within two weeks.

Despite these difficulties, at the **Proposed Rule (PR) 1410 Working Group meeting 4, August 2, 2017, staff issued a correct scientific assessment of MHF.** The staff was concerned with information provided by TORC because no experiment based on all current operating conditions (pressure, temperature, weight % HF) could be found and because of questionable reliance on MHF vapor barriers (e.g., flange shrouds, settler pans, pump seals), etc. Based on the information SCAQMD had received, staff found insufficient evidence that a dense vapor cloud does not form. Staff pointed out that mitigation measures do not guarantee adequate protection in the unplanned event such as a major accident or earthquake causing equipment failure due to factors such as the loss of power and lack of water or water pressure. Staff therefore determined it was necessary to phase out MHF technology.

But at the SCAQMD Refinery Committee Meeting on January 20, 2018, that cautious but correct scientific assessment was replaced by something entirely different. The senior staff's briefing instead pleads incapacity: "assessing the safety of MHF technology is very complex and uncertainty still exists." Instead of a phase out, more HF mitigation measures spread over nearly a decade are proposed.

The SCAQMD justifies this conclusion by granting "some, but uncertain, HF mitigation benefits offered by MHF (< 35%)," a claim based on one graph presented by ToRC. The briefing goes on to give ToRC and MHF the benefit of the doubt, ignoring "all the uncertainties," and granting ToRC full credit for all

safety claims, an 89% reduction in airborne HF. But even then, the report continued, a potential release of 5,200 lb. HF could occur from a rupture in the settler tank. However, the briefing still admits *SCAQMD can't say if an MHF release would form a vapor/aerosol cloud upon accidental release.*

Community members were rightly given assurances the SCAQMD never rewrites a scientific assessment in the light of political considerations. How then shall we interpret its transition from “MHF safety claims have not been proven and a phase out is necessary” to “MHF is too complex to assess so let's trust mitigation measures”? MHF's simplicity unfolds clearly in our briefing. Not only do safety claims remain “unproven,” the equivalence of the airborne hazard posed by MHF and HF alkylation is proven. The level of uncertainty regarding the temperature at which MHF “flashes” is trivial compared to alkylation unit parameters.

The AQMD's invocation of uncertainty as a reason not to phase out MHF contradicts its stated position that MHF is HF until proven otherwise. After more than a year of investigation, the 1/20 staff report is a regurgitation of the refinery's EPA RMP report, discredited by the EPA 2017 Inspection Report, the CSB final report, and the analysis of eight independent South Bay scientists and engineers.

The City of Torrance, refineries, and many officials recognize the SCAQMD as experts uniquely qualified to do a MHF scientific assessment. Many elected representatives and public servants decline to publicly support a MHF ban because “political pressure” would be indelicate interference in SCAQMD's scientific investigation. In light of these expectations and the weight of its responsibility to assure public safety, the SCAQMD must deliver an accurate and full scientific MHF assessment, uninfluenced by economic or political factors.

It is unacceptable to risk a disaster of Bhopal proportion in LA County. No economic or political assessment can change that. Moreover, if this indecision on MHF stands, our community will remain “officially” in denial of MHF hazards, ignorant and unprepared for an HF release should it happen. The final decision about “what to do,” whatever it may be, should rest on the objective, thorough, and expert MHF assessment the public has been promised. If the AQMD finds MHF too complex to assess, it should reach no decision on its own. We recommend hiring Dr. Ronald Koopman to assist.

SCAQMD must not take it upon itself to invent “failsafe” HF mitigation measures never implemented, tested, or proposed by the HF industry. Note that the loss of power and lack of water or water pressure will similarly affect your “failsafe” measures, as would negligence, poor maintenance, lack of proper procedures, human error, and the many egregious problems identified by Cal OSHA following the 2/18/2015 near miss on MHF and by the EPA after its 2016 inspection of the alky unit. We've been down that road before: MHF was a third generation “failsafe” HF mitigation measure.

We offer our assistance in understanding MHF and request a time to brief staff within two weeks.

Sincerely,

Sally Hayati, Ph.D.
President, Torrance Refinery Action Alliance