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From: Office of the Executive Officer	Date: 4/23
To: Phil/Susan	
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For your action by: _____	For your info: <input checked="" type="checkbox"/> handling <input checked="" type="checkbox"/>
Draft response for: _____	signature, cc: _____

April 19, 2018

Mr. Wayne Nastri
South Coast AQMD
21865 Copley Dr.
Diamond Bar, CA 91765

PROPOSED RULE 1410, Hydrogen Fluoride Storage and Use at Petroleum Refineries in LA County

Dear Mr. Nastri,

Further to my public comments at the February 1, 2019 Governing Board Meeting of the SCAQMD, I am writing you to indicate my desire **that the SCAQMD adopt a strong Rule 1410 prohibiting the use of MHF in South Bay refineries and mandating MHF replacement** with a safe alternative within four years or sooner. I oppose any agreement between the SCAQMD and refiners that allows alkylation with a HF/MHF catalyst combined with advanced mitigation systems regardless of their design or projected efficacy.

As a parent of two children who attend school within one mile of the Alkylation Unit of the Torrance Refinery this issue is of great concern to me. As a degreed engineer and president of a company that manufactures ASME Code safety valves I am familiar with the potential failure modes of pressurized systems and industrial processes. I approach this issue from a position of understanding the underlying risks as well as the reality that our society depends on the responsible use and processing of our natural resources. **With regard to the use of MHF in our South Bay refineries the potential impacts of an accidental release are far too great to justify the continued use of MHF over safer alternatives.**

13 TO 24 MINUTES TO LIVE

HYDROFLUORIC ACID POSES TOO GREAT A RISK FOR USE IN DENSELY POPULATED AREAS. Hydrofluoric acid is a useful but notoriously LETHAL industrial chemical. Even in small quantities HF acid presents a significant health risk. Large volumes of HF are present and used in the alkylation process at two South Bay refineries – 55,000 gallons at Valero Wilmington and 25,000 gallons at Torrance Refining.

In the 1986 “Goldfish” test conducted in the Nevada Desert 1000 gallons of HF was released from a 1.65” diameter hole in 2 minutes. An 8-foot-high, ground hugging cloud of HF vapor formed and expanded traveling in a relatively light 12 mph wind. **HF concentration measured 2 miles from the release point exceeded 400ppm, more than 2 times the lethal limit.**

Almost 400,000 people live within 3 miles of the two South Bay refineries. On an average day the wind speed in Torrance is 5 to 9 mph – at that speed, a ground hugging cloud of HF vapor would travel 2 miles

in approximately 13 to 24 minutes. The speed at which this disaster would occur, and area population density would render any evacuation effort impossible. **There is no "SHELTER IN PLACE" from MHF.**

MITIGATION SYSTEMS MAY FAIL

Mitigation systems may reduce but cannot eliminate the effects of a large scale MHF release. In the event of a catastrophic earthquake, terrorist attack or cascading system failure any mitigation systems may fail. No credible mitigation system designs have been proposed, planned, constructed or tested. In addition, development and testing of mitigation methods will require years to complete with no certain result.

While the probability of occurrence for these events may be low, the consequences of such an event could be unimaginable. For these reasons, **the only truly safe mitigation step is the complete phase out and ban of HF/MHF alkylation in Southern California.**

SAFER ALTERNATIVES EXIST

The Valero Wilmington and TRC Torrance refineries are the only two left in California that still use HF/MHF Alkylation. All other refineries have switched or were constructed to use safer alternatives such as Sulfuric Acid catalyst. Newer Solid Acid Catalyst and Ionic Liquid process refineries are in operation in other states and countries. The only factor precluding the conversion of the Valero and TRC refineries is an estimated cost of \$400M to \$900M. **What price will the SCAQMD place on the lives of the 400,000 people living near these refineries?**

NO MOU CAN EVER BE STRONG ENOUGH

I oppose the SCAQMD attempting to develop and entering into a MOU with the refineries. A strong and formal Rule 1410 requiring the complete phase out of MHF is the only sure path to improving the safety of our community. The refineries have had 35 years to produce data and sound scientific analysis to demonstrate that the worst case scenario cannot happen. They have failed to do so because they know the true risk and the potential costs. Two similar government efforts to eliminate HF alkylation hazards failed: the 1990 Torrance-Mobil Consent Decree and 2003 SCAQMD-Valero MOU.

The explosion at the Exxon Mobil Refinery on February 18, 2015 was a wake up call - We can't afford another failure. The next time we will not be so lucky.

Sincerely,



Brian Babb

Torrance Resident

CC: South Coast Air Quality Management District Governing Board Members, Wayne Nastri, SCAQMD Refinery Committee Members (via email to Christina Lopez)