

3/13/18 AGENDA, ITEM 6A - CONSIDERATION OF THE SUBMITTAL OF A RESOLUTION OR LETTER SUPPORTING A REQUIREMENT TO IMPROVE SAFETY AT THE TORRANCE REFINERY BY THE SCAQMD THROUGH THE RULE 1410 PROCESS AND OPPOSING TO THE USE OF MODIFIED HYDROFLUORIC ACID AT THE REFINERY.

SUPPLEMENTAL LETTERS SUBMITTED TO THE CITY COUNCIL BETWEEN FEBRUARY 26, 2018 - MARCH 12, 2018 FROM THE FOLLOWING PEOPLE:

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- 1. Barbara Sabo, Hermosa Beach
- 2. Kimberley and Bill Power, Hermosa Beach
- 3. Philip Tom, Torrance
- 4. Carolyn Yoshida, Redondo Beach
- 5. Lenore Landis, South Bay
- 6. Joan Engelhaupt
- 7. David Boule, Torrance
- 8. Katie Baad, South Bay
- 9. Ken Sarno, Hermosa Beach
- 10. Dean Mullen, Safety Modeling
- 11. Steve Dillow, Torrance
- 12. James Eninger, TRAA Science Advisory Panel
- 13. Rosanne Basu, Hermosa Beach
- 14. Baird Kusaka, South Bay
- 15. Suvan Geer
- 16. Nicky Tenpas
- 17. Catherine Luciano, Torrance
- 18. Sierra Club, Palos Verdes - South Bay Group
- 19. Pratik Basu, Hermosa Beach

**From:** Barbara Sabo [<mailto:bsabo@jsaboassoc.com>]  
**Sent:** Monday, February 26, 2018 2:01 PM  
**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>  
**Cc:** [citymanager@hermosabch.org](mailto:citymanager@hermosabch.org); Kenneth Sarno <[kmsarno@verizon.net](mailto:kmsarno@verizon.net)>  
**Subject:** IMPT: City Council Agenda Item: Ban on Modified Hydrofluoric Acid (MHF)  
**Importance:** High

Dear Hermosa Beach City Council,  
Thank you for taking steps to protect the citizens of Hermosa Beach by resolving that our City will fight for the ban on Modified Hydrofluoric Acid (MHF) in the two MHF refineries in Torrance and Wilmington within four years. I attended last Saturday's rally at Columbia Park in Torrance; and, I am happy to report that our South Bay communities are rallying and fighting with us.

I am also happy that you are taking concrete steps to end this disaster-waiting-to-happen. I maintain the Torrance Refinery Action Alliance (TRAA) project board for the South Bay on NextDoor.com and I hope you follow my announcements of events as they develop. I'll include a note about Tuesday night's City Council meeting today.

I have written to the HB City Council about this item of critical importance on prior occasions because MHF is a regional problem---and that includes Hermosa Beach. MHF endangers all of us because it poses significant risk to communities within 16 miles of the refinery alkylation unit, which in the case of the Torrance Refinery is 3.4 miles from Hermosa Beach City Hall.

Studies presented by the AQMD as recently as this past January emphasize that while everyone agrees about the lethal danger of a widespread MHF cloud, the refinery has not shown that they could deal with one. If you're interested, watch the first 20 minutes of this recent video and count the number of times the AQMD staff scientist uses the word "uncertainty" regarding MHF mitigation during his presentation <https://youtu.be/p45jLJ6uniE>.

The TRAA Science panel has worked very hard over the past 3 years to uncover the facts regarding MHF. Their results agree with the findings of the AQMD and other regulatory agencies. The bottom line is this: large areas surrounding MHF refineries are subject every day to a lethal risk which is not only unacceptable but also \*unnecessary\* because an alternative chemical could be used instead of MHF. In fact the alternative, sulfuric acid, has long been used in all California refineries except the two in Torrance and Wilmington. The obstacle to solving this problem is that the refinery doesn't want to spend the money to change from a dangerous acid catalyst to a safer one. This Tuesday's resolution asking the AQMD to require and accelerate this changeover will hopefully go a long way towards a prompt resolution of this problem.

Special thanks to Ken Sarno for his reminder about Tuesday night's City Council meeting. On behalf of my family and our Beachside neighbors, we thank City Council for taking such positive action!

Best regards,  
Barbara Sabo  
Beachside Condominiums HOA  
447 Herondo Street #305  
Hermosa Beach, CA 90254  
(310) 374-2301

**From:** K Power [[mailto:Kimberley\\_Power@hotmail.com](mailto:Kimberley_Power@hotmail.com)]

**Sent:** Monday, February 26, 2018 8:08 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** MHF resolution

Please adopt the resolution in support of a ban on Modified Hydrofluoric Acid (MHF) in the two MHF refineries in Torrance and Wilmington. It is very important to us as long time (25+ years) Hermosa Beach homeowners/residents.

Thank you!

Kimberley and Bill Power

1215 1st Street, Hermosa Beach

**From:** Philip Tom [<mailto:pcalvus@gmail.com>]

**Sent:** Friday, March 02, 2018 2:11 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Upcoming vote on Torrance Refinery, 13 Mar 2018 Council Meeting

Gentlemen,

As a resident of the Beach Cities area since 1990, I would like to relay to you my concern over the continued use of MHF (modified hydrofluoric acid) in the refining process used at the Torrance facility. As you probably are aware by now, the substance, whose use has been discontinued at all other CA refineries save this one and the Valero plant in Wilmington, is utilized in such quantity that a mishap at the plant carries the potential for widespread injury and fatality not only to Torrance residents, but to your community and surrounding areas as well.

I understand that you will vote on supporting a resolution to ban use of the substance at your upcoming meeting. Please vote in favor.

Although I tend to lean towards supporting business activity and the continued prosperity of our region, the continued use of MHF is not compatible with citizens' rights to a safe living environment. The refinery's opposition has been on the grounds of cost, not technical feasibility (and their stated estimate of a conversion to a safe alternative has been disputed). How much is public safety worth? I feel that the switch to the use of other chemical processes by virtually every other refinery in our State (and many elsewhere in the nation), speaks volumes.

Respectfully,  
Philip Tom

1625 Beech Ave., Torrance. (previously in Redondo and Manhattan Beach).

**From:** Carolyn Yoshida [<mailto:cyoshida9@gmail.com>]

**Sent:** Friday, March 02, 2018 2:19 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Please support a ban on MHF in Hermosa

Dear Mayor Duclos and Councilmembers Armato, Campbell, Fangary, and Massey:

I'm writing to ask that you vote on Tuesday, March 13 to support a ban on MHF at the Torrance and Wilmington refineries.

I'm a lifelong resident of Hermosa Beach and the South Bay. This area has always been a mix of industry and residents co-existing and benefitting each other. Let's keep Hermosa and the rest of the South Bay beautiful and safe for its workers and residents. Once a industrial accident happens, it will be too late to save our local economy and people's lives. We can work together and do what it takes to protect our families and hometowns.

Thank you for your consideration and good judgment.

Regards,  
Carolyn Yoshida  
Redondo Beach, CA

**From:** Ed and Joan [<mailto:edandjoan@roadrunner.com>]

**Sent:** Saturday, March 03, 2018 12:21 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Vote to Ban MHF

Dear Members of the Hermosa City Council:

I urge you to vote yes on the resolution calling for a ban on the use of hydrofluoric acid ("modified" or not) by the only two refineries in California still using this deadly chemical. Hermosa Beach is within the radius that would suffer grave injuries and death should this chemical be accidentally released, as almost happened at the Torrance refinery when there was an explosion three years ago. Please protect the people you represent by voting yes on this resolution.

Yours very truly,

Joan Engelhaupt

**From:** Lenore Landis [<mailto:llandis@cypresscollege.edu>]

**Sent:** Saturday, March 03, 2018 10:25 AM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Please Replace MHF with a Safe Alternative

Dear Councilmembers,

My name is Lenore Landis, I am a mother of two young boys, I am the Chemistry Department Chair at Cypress College and I am a South Bay resident. I attended the last SCAQMD PR 1410 meeting on January 20<sup>th</sup>, where I heard a teacher explain that most South Bay schools are not prepared for a modified hydrofluoric acid (MHF/HF) release. I incorrectly assumed schools had a comprehensive shelter-in-place for chemical release plan that they practiced regularly. Since that day, I decided that protecting the children should be an immediate priority.

Due to unproven safety claims of MHF, our community is completely unprepared. My sons' teachers and principals have not been informed of MHF's existence. The following are just a few more important facts to demonstrate why MHF should be banned. MHF is 92% hydrofluoric acid (HF) and only 8% sulfolane additive. According to the Chemical Safety Board, a catastrophic MHF release nearly occurred at the Torrance Refining Company (ToRC) Feb. 18, 2015 when a large piece of equipment missed a MHF settler tank (holding 50,000 lb. of MHF) by just 5 feet. In 2017, an EPA inspection found that MHF safety systems at ToRC were left nonfunctional, sometimes for weeks and the official toxic radius was significantly understated at 3.2 miles. The SCAQMD staff's scientific assessment of MHF in 2017, reported that MHF safety claims could not be proven. Lastly, existing mitigations do not guarantee adequate protection from a major accident or earthquake because of possible breaches in barriers, loss of power, and lack of water or water pressure.

As a mother, I just want to know that my children will be protected at school and their teachers are equipped for the highest level of precautions during an accidental MHF release. But we do not have this type of preparation-- again, this is due to the unproven safety claims of MHF and lack of community education from ToRC. The refinery should provide South Bay communities (especially the schools) with comprehensive emergency plans and drills, but they haven't.

The South Bay has tolerated this risk far too long because of false assurances that MHF is "safe." MHF should be replaced with a safe technology, with a four year transition period.

Your willingness to support a ban of MHF will be greatly appreciated by all South Bay residents. Thank you for your time.

Best regards,  
Lenore Landis

Lenore Landis  
Professor of Chemistry  
Cypress College SEM Division

**From:** David Boule [<mailto:dwboule@gmail.com>]  
**Sent:** Sunday, March 04, 2018 2:42 PM  
**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>  
**Subject:** Re: Support a SCAQMD Rule to Replace MHF

Apologies, I forgot to include my address. I am a 25 year resident of the South Bay, currently living at 2800 Plaza del Amo, #71, Torrance, CA 90503. Again, thank you.

On Sun, Mar 4, 2018 at 10:57 AM, David Boule <[dwboule@gmail.com](mailto:dwboule@gmail.com)> wrote:

Dear Honorable Hermosa Beach Mayor and City Council Members,

I'm writing to urge you, at your March 13, 2018 meeting, to vote "Yes" on a resolution in support of banning modified hydrofluoric acid (MHF) at the Torrance Refinery. Here are some relevant facts:

- We need to ELIMINATE HF alkylation in the South Bay before it's too late because THERE IS NO WAY TO MINIMIZE THE RISK TO AN ACCEPTABLE LEVEL.
  - We live in an earthquake hot zone, with powerful quakes expected on multiple faults
  - The Department of Homeland Security has designated this region a High Urban Area for terrorist attack. MHF is a federally designated Chemical of Interest for terrorist use
  - The Torrance Refinery has a decades-long history of mishaps, serious industrial accidents, and dangerous practices. The most recent: the refinery was found just last week to have illegally accumulated 300 20-cubic yard bins of hazardous waste.
- The South Bay is the second most densely populated HF refinery area in the U.S. A release here would affect 2-to-30 times more people per square mile than a comparable release in any other area.
- A leak, like almost happened as the result of an explosion at the Torrance Refinery in 2015, could have life-threatening effects on people as far away as 15 miles, after even a short term exposure. The citizens and business of Hermosa Beach are definitely in the "kill zone."
- Beyond the health risks, a leak of MHF at the Torrance Refinery would have an extreme and long term negative impact on the real estate values and business health of all of the South Bay.
- A four-year transition period - to reduce the economic burden on the Torrance Refinery - is fair and generous, especially for a facility that has been deceiving its neighbors for nearly three decades.
- The risk of an HF release is *avoidable*. There are much safer alternatives already in use by all of the Torrance Refinery's California competitors.
  - Chevron is voluntarily converting its only HF refinery to ionic liquids
  - Eight other California refineries use safer sulfuric acid
- Switching to an MHF replacement will create jobs, not eliminate them.

"Mitigation measures" will NOT protect the lives and economy of this region. We must replace MHF with a safe and viable alternative - before it is too late!

Thank you.

**David Boule'**  
[dwboule@gmail.com](mailto:dwboule@gmail.com)  
310.922.2286

**From:** KTB [<mailto:katiebaad1@gmail.com>]

**Sent:** Wednesday, March 07, 2018 4:00 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Use of Modified Hydrofluoric Acid (MHF) in the Torrance Refinery

Dear Mayor Duclos and Hermosa Beach City Councilmembers,

I want to extend my thanks to you for addressing the risk that the Torrance Refinery poses to the surrounding community.

I am a licensed Civil Engineer and have been in practice for close to 20 years. I became interested in the workings of the Torrance Refinery after the February 2015 explosion which spread industrial ash over the city. I had made the South Bay my home, started my family and put my children into South Bay schools when this explosion happened. The explosion concerned me to the point of spending over a year researching the history of the Torrance Refinery and its use of Hydrofluoric Acid. The more I learned, the more my concern grew. The use of HF, in any form (especially the minimal amount of Sulfolane added for modification) has no safe place in our densely populated community.

The community has been fighting this battle against HF/MHF for over 25 years. I encourage you to take a strong stance on *replacing* MHF with a safe alternative within 4 years of rule 1410 adoption. *No more mitigation measures.* I design structures on a daily basis and train my staff to engineer structures according to California Building Codes. One of the first rules in engineering is that no building is "earthquake proof". The only acceptable mitigation when dealing with a chemical as highly toxic and volatile as HF is to remove the acid altogether.

Sincerely,  
Katie Baad, P.E.

**From:** Kenneth Sarno [<mailto:kmsarno@verizon.net>]  
**Sent:** Thursday, March 08, 2018 9:07 AM  
**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>  
**Cc:** [citymanager@hermosabch.org](mailto:citymanager@hermosabch.org)  
**Subject:** DB article on Redondo City Council 3/6 MHF Meeting

Ladies and Gentlemen,

As you are no doubt aware, on this past Tuesday, March 6 the Redondo Beach City Council unanimously resolved to advise the AQMD to incorporate a ban on MHF into the Rule 1410 process. Mayor Bill Brand, though not a voting City Council member, also endorsed that decision and in fact was one of the more compelling speakers in favor of a ban at the proceeding.

The Daily Breeze article attached presents a decent summary of that meeting. The article quotes Gerry O'Connor as pointing out that the approximately 40 public input speakers were roughly evenly divided between ToRC refinery employees/executives and other residents who were not associated with a refinery. All non-refinery residents spoke in favor of a ban (except for one speaker who would prefer to shut the refinery down entirely).

We are hoping to get all three Beach Cities aligned in this way, with unanimous City Council resolutions directed to the AQMD in favor of a ban. The Hermosa Beach 3/13 agenda has not yet been posted as of this date, but we look forward to the discussion of your existing resolution at that meeting.

Best Regards,

Ken Sarno  
1040 10th St.  
Hermosa Beach, CA 90254  
[kmsarno@verizon.net](mailto:kmsarno@verizon.net)  
310-379-1745 (landline — messages)

<https://www.dailybreeze.com/2018/03/07/redondo-beach-supports-proposed-elimination-of-toxic-chemical-at-torrance-refinery/>

**From:** Kenneth Sarno [<mailto:kmsarno@verizon.net>]

**Sent:** Saturday, March 10, 2018 2:25 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>; [citymanager@hermosabch.org](mailto:citymanager@hermosabch.org)

**Subject:** The Poor Broke Refinery

Ladies and Gentlemen,

The ToRC tactic of threatening to abandon the Torrance PBF refinery and tank the regional economy if forced to spend money on a new alkylation unit is a bluff. I sincerely hope you view it that way unanimously when thinking about your upcoming resolution.

From page 30 of PBF Energy's 2016 Financial Report.

"We cannot predict what additional health, safety and environmental legislation or regulations will be enacted or become effective in the future or how existing or future laws or regulations will be administered or interpreted with respect to our operations. Compliance with more stringent laws or regulations or adverse changes in the interpretation of existing requirements or discovery of new information such as unknown contamination could have an adverse effect on the financial position and the results of our operations and could require substantial expenditures for the installation and operation of systems and equipment that we do not currently possess. We cannot predict what additional health, safety and environmental legislation or regulations will be enacted or become effective in the future or how existing or future laws or regulations will be administered or interpreted with respect to our operations. Compliance with more stringent laws or regulations or adverse changes in the interpretation of existing requirements or discovery of new information such as unknown contamination could have an adverse effect on the financial position and the results of our operations and could require substantial expenditures for the installation and operation of systems and equipment that we do not currently possess."

So basically, "We're in a dirty business and sometimes we're forced kicking and screaming by new regulation to spend money to clean it up a little." There's no better illustration of that than their recent mandate to remove thousands of tons of toxic waste that has been sitting illegally for years on the refinery grounds.

PBF bought a distressed asset from a highly motivated seller at a low price and needs it to make them a fortune, which it will. Switching to an alkylation method without catastrophic potential does nothing for their Torrance products. In terms of ROI, it's strictly an I with no R from the standpoint of PBF shareholders. The return on that investment is purely increased safety for the community, something which is immaterial to their shareholders. So of course they're going to fight spending the money. But their financial report states specifically that they expect that kind of required spending, because they're a dirty business. Meanwhile they sell 10 or 12 or 15 billion gallons of product annually.

It is likely that the Trump corporate tax reduction from 35 to 20% alone would cover their costs for a new H<sub>2</sub>SO<sub>4</sub> alkylation unit within a few years. There are aspects of the new tax law regarding accelerated depreciation of capital expenses that I am not sophisticated enough to understand. But if you take the oversimplified slogan of "write off 100% capex in the year that

you spend it for the next 5 years” at face value, ToRC’s new alkylolation unit and H<sub>2</sub>SO<sub>4</sub> regenerator could be largely paid for by the public.

After reviewing the RB council video from March 6, I think a significant factor in the RB Council’s wisely ignoring PBF’s empty threat to shut down Torrance and walk away was that one of the RB council members was a finance person who had done some homework on ToRC financials and was aware of the big picture.

<http://investors.pbfenergy.com/~media/Files/P/PBF-Energy-IR-V2/documents/annual-reports-and-proxy/2016-annual-report.PDF>

Sincerely,

Ken Sarno  
1040 10th St.  
Hermosa Beach, CA 90254  
[kmsarno@verizon.net](mailto:kmsarno@verizon.net)  
310-379-1745 (landline—messages)

**From:** [dean@safetymodeling.com](mailto:dean@safetymodeling.com) [<mailto:dean@safetymodeling.com>]

**Sent:** Friday, March 09, 2018 12:55 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** HF Acid Toxic Circle

Dear Councilmembers,

I'd ask PBF Energy any one of these questions:

1. When following USEPA's Part 68 Risk Management Program procedure, why is such a large circle drawn over our region if we're not to worry? From a toxic concentration point of view, what does the drawn circle signify exactly for citizens?
2. When Burns & McDonnell performed the sulfuric acid project estimate for Torrance (\$600million), did they use CB&I's highly proprietary, proven lower cost, lower emissions, simpler equipment sulfuric acid technology or the old conventional sulfuric acid Alky technology? CB&I's latest sulfuric acid technology is apparently selected at the similarly sized Valero New Orleans Alky upgrade project due to start-up 2 years from now (don't believe they use HF but still very relevant).
3. If an earthquake happened near the Torrance refinery, would the HF remain safely in the storage vessels or would it be released offsite compounding the earthquake problem?
4. Is that many pounds of HF onsite too much of a monster for anyone to truly vouch for? I'm a professional, and I'd never make that claim of safety for the surrounding community. A refinery is one big flammable installation so you have a fire on top of it.
5. Why have an HF emergency warning system for the community when there's no practical way to evac in time anyway? Miles from the refinery / Wind MPH x 60 minutes = minutes everyone has to be out of the circle if notified instantly. Just make sure the public doesn't think a potential HF warning system makes them safe is my point; it would save some fraction? Has anyone calculated how many car wrecks if it alarms or even false alarms?

By way of credentials: I have a chemistry degree, an M.S.in chemical engineering, 25 years technical experience in the chemical and oil & gas industries and plenty of experience with HF. The EPA RMP circle implies much more though.

I thank you for reading this.

Best regards,

Dean Mullen M.S., P.E.

[dean@safetymodeling.com](mailto:dean@safetymodeling.com)

Cell/Text: 214-784-4069

[www.safetymodeling.com](http://www.safetymodeling.com)



**From:** Steve Dillow [<mailto:scd43@live.com>]  
**Sent:** Saturday, March 10, 2018 3:46 PM  
**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>  
**Subject:** Replace MHF at the local refineries

Dear Councilmember,

My name is Steve Dillow, and I live in the neighboring city of Torrance. I am writing to request that you support the ban of the toxic chemical MHF (and HF) from the local refineries. The AQMD staff has already acknowledged that it is a dire threat to our lives and health, and that the near catastrophe in 2015 almost killed or injured in the tens of thousands.

In the meetings and workshops that I have attended, the dominating voice in opposition was the threat of a loss of jobs. The workers have evidently been told that the plant would shut down rather than bear the cost of converting its alkalation process to something safer. I would like to question that assumption.

The cost estimates for the conversion away from MHF range from \$100M-\$400M from multiple independent consultants to almost \$900M from a company-paid consultant. And the state board made a presentation about the assumption of a complete shutdown based solely on the exaggerated refinery-paid estimate. I don't believe that a closing is even a remote possibility.

According to the PBF website: "The Torrance refinery is located on a 750-acre site in Torrance, California. The refinery receives its crude oil primarily through a direct pipeline connection to California central valley and also has access to waterborne feedstocks through the Ports of Los Angeles and Long Beach. ... In addition to blending three grades of gasoline, Torrance produces diesel fuel, jet fuel, liquefied petroleum gases (LPGs), coke and sulfur. The refinery ships products to customers via a series of proprietary pipelines and terminals throughout the region via truck, rail, barges, and ships."

The pipelines are the major mechanism for receiving and distributing its products, And one single pipeline is estimated to be worth over one billion dollars. Would they walk away from that, after paying pennies on the dollar for the entire factory? Besides, closing the place would likely open them up to paying for a Superfund site, especially after finding the tens of thousands of tons of hazardous waste illegally stored there.

And according to their reported 2017 financial results, the Torrance refinery made almost \$200M profit last year, after spending millions to upgrade their electric service and reduce the flaring. And the corporation had a "Tax reform related benefit of \$173.3 million ". Indeed, the tax law changes have made all the cost estimates obsolete, as they can now write off most of the capital expenses in the year incurred, and pay a much lower tax on remaining profits.

So PBF would not walk away from a very profitable entity as this refinery. In the very worst case, they would sell it, just as Exxon-Mobil did after the explosion. (They didn't have any trouble finding a buyer). But the jobs would stay in any case.

As far as jobs, the ban on MHF will require them to convert their plant to some other process, which would entail hundreds of **additional** jobs for several years. A win-win for our community and refinery workers.

Unfortunately, my city doesn't seem to care about our lives or health, so they refuse to take action. So it has been up to concerned and worried citizens to take up the matter. Please follow in the footsteps of the L.A. County Supervisors and your compatriots in Redondo Beach and support this ban. I don't want Bhopal to forever be known as the "Torrance of India".

Thank you for hearing me out,

Steve Dillow

Torrance CA

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**Steve** – [scd43@live.com](mailto:scd43@live.com)

**From:** Jim Eninger [<mailto:jeninger@earthlink.net>]

**Sent:** Saturday, March 10, 2018 4:55 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Daily Breeze Opinion Piece - Who is telling the truth about the Torrance refinery?

*Dear Hermosa Beach City Council Members,*

*I pasted below the original version of an opinion piece that the [TRAA Science Advisory Panel](#) submitted to the Daily Breeze. It was published, lightly edited, on Tuesday, November 28, 2017.*

*This piece is our best effort to make a compelling case in 600 words to ban hydrogen fluoride alkylation in the South Bay. It has links to make it easy to find the back-up material. I hope you'll have a few minutes to go through it.*

*Now with Congress having passed massive tax reductions for corporations to encourage investment, there is no financial obstacle to Torrance Refining Company and Valero from making the switch to a much safer process. And, over the next five years, corporations can write off investment expenses in the same year they are made.*

*I urge you to pass a unanimous resolution of support for the SCAQMD to ban MHF as soon as possible.*

*Respectfully,*

*James Eninger, Ph.D.*

*[TRAA Science Advisory Panel](#)*

*(310) 316-5574*

*P.S. At the bottom, I pasted a thoughtful online comment by Cathleen Clay.*

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*Link to the Daily Breeze Opinion Piece **Who is telling the truth about the Torrance refinery?** by the TRAA Science Advisory Panel:*

*<http://www.dailybreeze.com/2017/11/28/who-is-telling-the-truth-about-the-torrance-refinery/>*

## **Who is telling the truth about the Torrance refinery?**



Photo by Robert Casillas, Daily Breeze/SCNG

By the Science Advisory Panel of the Torrance Refinery Action Alliance  
**Charles Clendenning, James Eninger, Nahum Gat, David Hannum,  
George Harpole, Sally Hayati, Judith Scott, Christopher Shih**

<http://www.dailybreeze.com/2017/11/28/who-is-telling-the-truth-about-the-torrance-refinery/>

PUBLISHED: November 28, 2017 at 7:00 pm (original version submitted to the Daily Breeze below – lightly edited for publication)

## **THE TRUTH ABOUT MHF AT THE TORRANCE REFINERY** by the [Science Advisory Panel of the Torrance Refinery Action Alliance](#)

In his Daily Breeze Opinion [piece](#), Torrance Refinery manager Steven Steach categorically asserts, without any specifics, that warnings on the [TRAA door hangers](#) in its recent [100,000 door-hanger campaign](#) are incorrect and misleading and contain false claims about risks caused by the Torrance Refinery. The [TRAA Science Advisory Panel](#) of eight local scientists and engineers with extensive experience with highly toxic chemicals, carefully reviewed the door-hanger content and found it to be an accurate, concise statement of the current situation with no misleading information.

At least we can agree with the Torrance Refinery and the experts Mr. Steach cites that Hydrogen Fluoride (HF) is far too dangerous for a refinery to use in a highly populated area. Of the EPA's [list](#) of 255 extremely hazardous substances that require a Risk Management Plan, HF is in the group of the top 5% that are

the most dangerous. And, of Department of Homeland Securities' Chemicals of Interest (COI) [list](#) of the 187 substances with toxic releases, HF is in a group of six with the highest danger, edged out by only one chemical -- the infamously deadly phosgene, which killed about 85,000 in World War I. Mr. Steach states that the refinery phased out HF in 1997. But did it really?

In settlement of a lawsuit brought by the City of Torrance against the Torrance refinery in 1990, the then refinery owner Mobil agreed in a Consent Decree to eliminate HF if it failed to create a modified form of HF (MHF) that would not form a ground-hugging toxic cloud upon accidental release. A chemical "additive" was to be mixed into the HF to make it more like the much safer sulfuric acid that Chevron uses in its El Segundo refinery.

However, MHF failed spectacularly when tried out at the Torrance refinery in 1997. Outside the public eye, the refinery dialed back the additive from the 30-50% by weight it originally planned to [as low as 6.6% today](#) [page 11]. A simple calculation shows this is only 1 additive molecule per 100 HF molecules. At this token additive concentration, our calculations show MHF behaves just like HF.

And the South Coast Air Quality Management (SCAQM) staff agrees. As part of its process to establish Rule 1410 requiring HF/MHF replacement, the staff has reviewed the voluminous proprietary data provided by the refinery and [concluded](#) [page 4&5], "...the testing/modeling information provided by TORC did not sufficiently demonstrate MHF would not ... form a dense HF cloud." As Congressman Ted Lieu [stated](#), "Exxon-Mobil hoodwinked this community."

But the situation gets even worse. The [highly qualified](#) [page 34] Quest Consultants, Inc. conducted MHF release experiments for Mobil. But Mobil must not have liked the results. At the experiments' completion, Mobil employees came in and took away every scrap of data and have kept it secret for more than 20 years. However, in Quest's peer-reviewed, 1995 [paper](#) [Fig. 6], the unequivocal assessment by the same Quest researchers is that 100% of an accidental release of MHF mixed with hydrocarbons will go airborne in an aerosol cloud -- none "rains out" to the ground, even with a much higher level of additive than is actually used. This important Quest paper, which directly contradicts Mobil's assertions about MHF's behavior, was not mentioned in reports to the Court by the Safety Advisor, who was handpicked by Mobil.

There's more. In its 2004 [Hazard Analysis](#) [page 5-2] for the Valero Refinery in Wilmington, Quest experts report that the only safety advantage of MHF is an inconsequential 7.9% reduction in the toxic range -- hardly reassuring to residents of the South Bay.

Mr. Steach cautions not to be alarmed by EPA emergency “planning circles” that show the deadly reach of toxic chemicals. However, as the U.S. Chemical Safety Board noted, the February 18, 2015 explosion at the Torrance Refinery very nearly caused a catastrophic release of 50,000 lbs. of hydrogen fluoride into the community, just like the circles show.

Respectfully submitted,  
[\*TRAA Science Advisory Panel\*](#)

Charles Clendening, Ph.D.  
James Eninger, Ph.D.  
Nahum Gat, Ph.D.  
David Hannum, Ph.D.  
George Harpole, Ph.D.  
Sally Hayati, Ph.D.  
Judith Scott, Manager (retired)  
TRW Chemistry Technology Department  
Christopher Shih, Ph.D.

*Selected Comment*  
*By Cathleen Helena Clay*

I think it's important to remember that the refinery and TRAA are not two equal "sides" on this issue. The refinery has a major axe to grind financially (about \$600 million by their lights, but more like \$100 to \$300 million according to less interested parties), but members of TRAA, especially the science advisory panel have only the well-being of the community and their families as motivation. As the tobacco industry has shown, money is a powerful motivator to dishonesty. TRAA has no reason to lie. it has taken 50 years for the tobacco industry to be forced to come clean. I hope it will not take a catastrophe to prove that the refinery has been disingenuous.

**From:** Rosanne Basu [<mailto:rosannebasu@gmail.com>]

**Sent:** Monday, March 12, 2018 8:08 AM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Please Support a Ban on MHF

To Mayor Jeff Duclos, Mayor Pro Tem Stacey Armato, and Councilmembers Mary Campbell, Justin Massey, and Hany Fangary,

As a longtime resident of Hermosa Beach, I urge you all to join Redondo Beach in passing a resolution supporting a ban on MHF.

The human and economic costs of any accidental MHF release would be far greater than the refinery's own exaggerated and self-serving estimate of the cost of MHF replacement. Ours is the most densely inhabited area in the US with HF refineries with the exception of Philadelphia. An MHF release would affect our entire region, causing death and injury to neighbors, friends, co-workers, and family members, and causing property and business disruptions region wide.

The Torrance refinery has not been well run, but unhappily, even well run refineries are vulnerable to human error, mechanical failure, earthquakes, and terrorist attacks. A significant earthquake could cause a major MHF release while destroying emergency response systems. MHF is a hidden tax on all of us, to be collected in full when we least expect it. But there is no MHF emergency response plan for Hermosa Beach or any of the Beach Cities.

Thank you,  
Rosanne Basu  
532 Hermosa Avenue #6  
(310) 418-6488

**From:** Nicky T [<mailto:greenikita@gmail.com>]

**Sent:** Monday, March 12, 2018 11:08 AM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** AQMD

Dear Hermosa Beach city council members,

I have read the proposed letter written by Jeff Duclos and agree wholeheartedly with his statements.

I thank you in advance for sending this message and caring about the safety of our community, our children, and the environment.

--

Nicky Tenpas, OTR/L

**From:** Blue Kusaka [<mailto:B.Kusaka@birminghamcharter.com>]

**Sent:** Monday, March 12, 2018 9:27 AM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** Please Replace MHF

Dear Council Members,

My name is Baird Kusaka. I am a father of two young boys, and I am a South Bay resident. Please support a modified hydrofluoric acid (MHF) replacement for the following reasons:

1. At the last SCAQMD meeting, I learned that the Torrance Refining Company's MHF safety claims are based on one graph from modeled data and not test data.
2. The SCAQMD's scientific assessment made it clear, the refinery *cannot* prove MHF safety claims. Therefore, MHF should be treated as hydrofluoric acid (HF) until proven otherwise.
3. In 2017, an EPA inspection found that MHF safety systems at ToRC were left nonfunctional, sometimes for weeks and the official toxic radius was significantly understated at 3.2 miles. Without accepting the safety claims of MHF, the approximate toxic radius is 16 miles.
4. Existing mitigations do not guarantee adequate protection from a major accident or earthquake because of possible breaches in barriers, loss of power, and lack of water or water pressure.
5. Children cannot be protected in schools from a MHF cloud because teachers have too many windows to tape around and they can't even reach their high windows and vents.
6. MHF is outdated technology and should be replaced with one of three safe alternatives.

To improve our chances of survival, we need proper emergency preparedness. Emergency drills for an accidental MHF release should be practiced in all segments of the community, including schools, residential areas, commercial areas like malls and theaters, recreational facilities, hospitals, and businesses.

The only fail-safe solution is replacing MHF with one of three viable safe alternatives, within four years.

Thank you for your time. Your support will be greatly appreciated by all South Bay residents.

Sincerely,

Baird Kusaka

**From:** Suvan Geer [<mailto:SuvanGeer@SBCGlobal.net>]

**Sent:** Monday, March 12, 2018 10:55 AM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Subject:** City Council support a ban on MHF

I urge the Hermosa Beach City Council to send a letter to the AQMD about the Torrance refinery's continuing use of MHF in its facility because that's the only governmental agency tackling this problem and we need support.

In the Torrance explosion three years ago, federal agencies said that surrounding cities "dodged a bullet" because of the MHF on site. But there's no MHF emergency response plan from Torrance. The very minimum the HB City Council should do is send a letter to the AQMD demanding they make the facility switch to sulfuric acid so we can be safer.

If that MHF tank had ruptured 23 schools and thousands of homes in West Torrance and our city could have been immersed for 2-3 hours in a lingering fog toxic enough to kill.

Torrance's MHF acid has been proven to be as dangerous as regular HF acid. They just can't add enough of the modifier chemical (sulfolane) to their HF to get a useful alkylation product that's as safe as sulfuric acid. That's in violation of Torrance's consent decree. MHF is a threat to our own densely-populated community.

Three alternatives to MHF are commercially available now; none form drifting vapor clouds. Sulfuric acid is the proven option used by 8 CA refineries.

*Suvan Geer*

**From:** catherine luciano [<mailto:valentinegalcathy@yahoo.com>]

**Sent:** Monday, March 12, 2018 3:05 PM

**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>

**Cc:** [citymanager@hermosabch.org](mailto:citymanager@hermosabch.org)

**Subject:** In favor of letter to AQMD taking a position in favor of the ban of HF/MHF in refineries

Dear Honorable Hermosa Beach City Council,

I was hoping to appear to voice, in person, what I am including in this email, but am unable to, due to the flu.

I am a Torrance City resident living within 1 1/2 miles of both the Torrance AND Valero Refineries - well within the so called "kill zone", depending on the prevailing winds, as are all the beach cities.

There is a fallacy being promoted, that Modified Hydrofluoric Acid (MHF) is safe compared to HF. **THIS IS NOT TRUE.** MHF is 92% HF, and only 8% additive. So, it is essentially pure HF.

These refineries are located in a very densely populated areas where a chemical like HF should NEVER be used. Between the 2 refineries, there is almost **1 MILLION** pounds of the deadly chemical, hydrofluoric acid(HF) stored at these refineries. (**NOTE** - ONLY 2 refineries in ALL of California still use HF in their Alkylation process.) And, it only takes a 2.5% of body skin exposure to be lethal, and there is no realistic treatment. If one survives, there would be permanent life long disabilities.

We have been declared by Homeland Security as a possible terrorist target. How scary is that? What about a disgruntled refinery worker or a drone, or human error(often the cause of accidents). We have 2 airports nearby. A small plane from the Torrance airport could be nose dived right into the refinery. Then, there is the fact we are overdue for a major earthquake.

What these refineries would do if a catastrophe happened, would be to **WALK AWAY.** leaving the cities to deal with the death and destruction

There are safer proven alternatives, like Sulfuric Acid, that does not form a deadly ground hugging vapor cloud. I am a Clinical Laboratory Scientist and have worked with Sulfuric Acid and you would almost have to be immersed in it to be deadly. Sulfuric Acid is easily contained and neutralized with a base chemical. A commercial solid acid alkylation unit has been operating in the [Shandong Province of China](#) since 2015. And Chevron is converting its Salt Lake City alkylation unit from HF to [ionic liquids](#) right now, so to say it is not possible, untrue.

What also needs to be addressed is that the human and economic costs of any accidental MHF release would be far greater than the refinery's own exaggerated and self-serving estimate of the cost of MHF replacement. They bought this refinery for pennies on the dollar. Plus, all these expenses for conversion, would be tax deductible. Then, with all the tax breaks they have gotten from the current administration, there is no financial excuse.

Also, we need to be mindful that 4 to 6 tanker trucks of HF are being transported through our area EVERY month. We have seen recently on the news of a hydrochloric acid(HCL) truck being in an accident, where the chemical was released. The fact that such an incident could happen with an HF tank, is unimaginably horrific.

The idea that we could "Shelter in Place" is a joke. HF release forms a low lying vapor cloud. One would have to close off and tape off every crevice and vent in your home or work place in minutes of a release. NOT POSSIBLE. And, how about the people out walking, in parks, a school games, or driving, etc.

There is SO MUCH MORE I could list about why this chemical should be gone from our communities. But, I am hoping you will read all the material given you on both sides of the issue. And, you should come to the same conclusion as the LA County Board of Supervisors and your sister city, Redondo Beach, and support this ban.

The refinery need not close, like they are threatening- jobs would be retained.

So, I am urging the Hermosa City Council to send the letter to the South Coast AQMD that calls for that ban.

Sincerely,  
Catherine Luciano  
2007 Gramercy Ave  
Torrance, Ca 90501



## Palos Verdes- South Bay Group / Angeles Chapter

March 12, 2018

Hermosa Beach City Council:

We urge you to send your draft letter to the AQMD. It is a good strong letter, and says what needs to be said.

Most of the people in this coastal area, from Manhattan Beach to Carson, San Pedro, and Long Beach, live or work within an area that would be at risk if there were a major leak of hydrofluoric acid, HF, from one of these refineries, depending on which way the wind blew. The danger for airborne exposure is hydrofluoric acid rather than “modified” hydrofluoric acid, because once the hydrofluoric acid boils off from a leak, it leaves the modifier behind. And then the hydrofluoric acid plume would be flowing into our community.

We want safety for the workers, our children, our schools, our homes, our workplaces.

We are not asking the refineries to close.

We do not want to see the refinery workers lose their jobs.

We are asking that the refineries convert their processes to avoid using this deadly chemical hydrofluoric acid.

The refinery companies say it would be too expensive, that they cannot afford to make their refineries safer. We have heard this industry rhetoric many times before when safety regulations are discussed. When industry finally complies with higher standards, it costs them much less than they claim. They make their product safer without going out of business or making it too expensive for customers.

Just a few examples include: Seatbelts, Airbags, Smog control devices for cars, Smog control devices for big rigs, Better efficiency standards (MPG) for cars.

Support public safety. Send your letter to the AQMD.

s/

Alfred Sattler

Chair

Palos Verdes-South Bay Regional Group, Sierra Club

**From:** Pratik Basu [<mailto:pratikbasu@gmail.com>]  
**Sent:** Monday, March 12, 2018 3:53 PM  
**To:** City Council <[citycouncil@hermosabch.org](mailto:citycouncil@hermosabch.org)>  
**Subject:** Resolution to Support a Ban on MHF at the Torrance Refinery

Dear Hermosa Beach City Council,

As a longtime resident of our lovely little beach town, I would strongly encourage you to follow the example set by our neighbor Redondo Beach, and support a MHF refinery ban.

As you know, an explosion at the Torrance Refinery in 2015 came dangerously close to becoming catastrophic when we came within a few feet of having the MHF tanks explode.

Had the tanks exploded, the damage to the South Bay, including Hermosa Beach, would have been truly devastating, and the effects would have been felt for years to come.

The owner of the refinery, PBF Energy, does not have the necessary financial resources, or expertise, to properly safeguard us from any future MHF events. A ban of this toxic substance would help ensure a safer future for all of us here in Hermosa should the unthinkable happen.

Thank you for your time and consideration.

Cheers!

Pratik

---

Pratik Basu  
M: +1-213-985-0159 | E: [pratikbasu@gmail.com](mailto:pratikbasu@gmail.com)