



The Sabotage of the Torrance-Mobil Consent Decree¹

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April 13, 2017

In April 1989 Torrance brought a public-nuisance lawsuit against Mobil.^{1,2,3} In the words of the city, “[A]n accidental, uncontrollable or inadequately contained release of [hydrofluoric acid (HF)] in substantial amounts could cause a disaster of Bhopal-like proportions.”⁴ Mobil did not have the right to unilaterally impose such high risks on persons in surrounding communities to make a greater profit.⁵ Those words are just as true and applicable now as they were 28 years ago.

In October 1990 the lawsuit terminated with a court-approved Consent Decree^{6,7} requiring Mobil to stop HF use and switch to sulfuric acid by the end of 1997 unless it developed a safe form of HF (called Modified HF or MHF) by the end of 1994 that **wouldn't form an aerosol or dense vapor cloud upon release**.⁸ Mobil pledged to use MHF with 50% vapor suppressant additive and 50% HF.

US Representative Ted Lieu has correctly stated that the city of Torrance was “hoodwinked” by Mobil in the course of this Decree.⁹ Under the Decree, Mobil had to pay for an “impartial safety advisor” (SA) to evaluate Mobil and MHF and look out for the public interest. The SA was to be the sole technical evaluator with access to proprietary data. It was therefore essential that the SA be scrupulously independent and technically competent. Yet Judge Peetris allowed Mobil to select its own evaluator: industry consultant Westinghouse.¹⁰ This was a fatal blow to the integrity of the Decree.^{11,12,13}

Westinghouse's program manager was Steve Maher, a mechanical engineer. In 1991, Maher hired Theoretical Elementary Particle Physicist Dr. Geoffrey Kaiser as the SA's expert advisor. Just the year before, Dr. Kaiser has been employed by Allied Signal to protect its El Segundo refrigerant plant against SCAQMD's Rule 1410 to ban HF use.¹⁴ Kaiser was an author of Allied's report on the “Safe Use of Hydrogen Fluoride at the Allied-Signal Facility in El Segundo.” He provided the same service that year to HF-using California refineries Ultramar Refining in Wilmington (now Valero) and Golden West in Santa Fe Springs.¹⁵ Kaiser has similarly applied his skills to minimize the risks of two other notoriously toxic and volatile chemicals, ammonia and chlorine, as well as high-risk technologies for Du Pont and the atomic energy and nuclear weapons industries.¹⁶

Thus, *two HF advocates were put in the role of “impartial” Safety Advisor*, to be the sole evaluators of MHF and eyes of the public.¹⁷ Torrance was outraged and pointed out this was equivalent to “a fox watching the chicken coop.”¹⁸ The city countered by assigning Torrance Fire Department (TFD) Chief R. Scott Adams as liaison to keep an eye on the SA.¹⁹ Unfortunately, Adams was not up to the task of countering the combined influence of Mobil and the SA. Adams unreservedly supported the refinery's and SA's shared perspective at key points at which he should have sounded the alarm instead.

In 1994, MHF FAILED the Decree's acceptance criteria. This was unsurprising; alkylation requires an HF concentration near 90%, so 50% additive was too high.²⁰ Instead of forcing Mobil to switch to sulfuric acid as the Decree required, Chief R. Scott Adams recommended the city give HF a second chance by *modifying the Consent Decree*.^{21,22} Mobil, he said, should be allowed to “demonstrate to the SA's satisfaction” that MHF (with ~30% additive) was **no more dangerous than sulfuric acid, the sole alternative at the time**. Thus the Fire Chief pointed Torrance down a path that Mobil and the Safety Advisor had laid out. Relying on Adams' judgment, Torrance abandoned the opportunity to eliminate HF and agreed to modify the Decree,²³ seeming unaware that MHF's failure was a warning and that Mobil had a conflict of interest in doing the assessment. Mobil had spent years and tens of millions of dollars developing MHF; a switch to sulfuric acid would cost it an estimated \$100M.

¹ A copy of this document can be found at this link: <http://bit.ly/2ke0aBZ>. A fuller account of the Consent Decree, here: <http://bit.ly/2aMcTLB>

The SA carefully crafted the new acceptance condition. No tests were required; Mobil's "demonstration" was based on a Quantitative Risk Assessment (QRA). Dr. Kaiser was a pioneer in the use of QRA's to sell industrial risk.²⁴ The public was outraged at the city's submission to Mobil.²⁵ Chief Adams advised the city that, "The public's desire, yet inability to comprehend, technical answers created frustration and *unnecessary... suspicion of the safety advisor's evaluation, and the credibility of Mobil's* representatives."²⁶ History, however, shows the public was right. Quest Consultant's 1995 release tests found the opposite of Mobil's QRA: mixed in the alky unit with hydrocarbons, released sulfuric acid forms NO dense vapor cloud, whereas ALL released MHF becomes airborne, even with 50% additive.²⁷ The city belatedly protested and recommended changes to address concerns. One was to force Mobil to switch to sulfuric acid if MHF conversion turned out to be infeasible.²⁸ The Safety Advisor changed it to require only that Mobil "advise" on what it would do.

By the end of 1997, MHF conversion turned out to be infeasible. The SA's unabashed report, written in 1999 but unseen until 2015, reveals the new MHF unit was dangerously unstable and produced little alkylate of lousy quality.²⁹ Mobil quickly "advised" TFD Fire Chief Adams and hazardous materials officer Battalion Chief Kenneth Hall that it would slash the MHF additive to 10% and add physical barriers to the unit. Adams and Hall inspected and approved changes on behalf of the city.^{30,31} By molecule count, MHF is 2% additive and 98% HF. *Just like HF, 100% of released MHF forms a dense ground-hugging cloud.*³² The public was never informed of MHF's failure and the slashing of the additive. MHF safety claims continued unabated. No Consent Decree document has been found, despite searches and requests, which shows the court, mayor, or city council were informed.

At the end May 1998, praising the success of the Decree and admired for his role in it, Chief Adams retired at the age of 50.³³ By August 1998 he had established R. Scott Adams, Consultant³⁴ and received training and certification by Steve Maher's firm, Risk Management Professionals (RMP, established in 1995 to capitalize on Maher's visibility as Safety Advisor).³⁵ Adams' new career included an effort in 2008 to help Maher convince Bakersfield that MHF was safer than sulfuric acid for the Big West Refinery's proposed alkylation unit.^{36,37} Bakersfield and Kern County rejected MHF, upon the advice of then CA Attorney General Jerry Brown³⁸ and State Senator Dean Florez.³⁹ Adams was profiled on RMP's website page "Key Personnel" as late as 2011.⁴⁰

In 1999, Safety Advisor Steve Maher, former Chief Adams, Chief Hall, and Carolin A. Keith, the Public Affairs Manager of the Torrance Refinery, joined together in perfect harmony to write a "Practical Guide to Risk Management Communications."⁴¹ One chapter is titled, "Trust and Credibility." Their brand of risk communication was to misrepresent the facts about HF alternatives and leave South Bay residents in the dark about MHF's operational failure and the slashing of additive. The authors credit Dr. Peter Sandman for inspiring them with his theories on how to appease and minimize public "outrage" and "hysteria" over industrial hazards.⁴² They claimed one benefit of their approach was a "decreased potential for legal action by the community to enforce what it considers to be an equitable risk balance." "This has occurred," they warned, referencing the Consent Decree in a footnote.

Chief Hall followed Adam's example, retiring in June 2003 to create his own firm, K. M. Hall Consulting, and work as a consultant for Maher's RMP. Hall was profiled on RMP's website page "Key Personnel" at least as late as 2011.⁴³ Hall worked closely with Adams and the SA during the Consent Decree and participated in approving the slashing of MHF additive in 1998.

At the October 13, 2015 Torrance Community Workshop, Mayer and Kaiser promoted the same discredited story that sulfuric acid forms a persistent dense vapor cloud upon release and MHF does not. This opinion is found exclusively among MHF advocates.⁴⁴ The new owners, PBF/TRC, continue to make old and new unsupportable MHF safety claims in its "MHF Facts" ad, the TFD briefing at the February Refinery Workshop, and its "Setting the Record Straight" lobbying event in March.⁴⁵ But the cat is out of the bag. LA County residents are starting to realize: MHF is HF. We need to finally finish what we began in 1990, by banning HF/MHF at the last two California refineries using it, without delay.

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- ¹¹ Steve Maher was the Project Manager for the Court designated Consent Decree Safety Advisor (SA), first at Westinghouse, and after Westinghouse was removed in 1994 as Safety Advisor (Torrance and the Court were unhappy with its performance), he became the SA Project Manager for EQE, appointed the new Safety Advisor. Westinghouse originally bid \$350,000 for the entire Safety Advisor job but by the end of 1994 had spent \$1.35M while achieving little. Steve Maher was the Project Manager for most of that time. He moved to SA subcontractor EQE in 1993 and became SA Project Manager again after Westinghouse's termination and EQE's selection in 1994.
- ¹² 1991-05-31 "Judge Picks Mobil Nominee as Safety Firm for Refinery: Torrance: Proposal by Westinghouse is ruled 'clearly superior.' City officials who backed another firm are dismayed," JANET RAE-DUPREE and DEBORAH SCHOCH, LA Times, <http://articles.latimes.com/1991-05-31/local/me-2687_1_torrance-refinery>. The city wanted SRI International. SRI is an American nonprofit research institute headquartered in Menlo Park, California. The trustees of Stanford University established SRI in 1946 as a center to support economic development in the region.
- ¹³ By 1991 the AQMD knew enough to warn that MHF was likely to fail. SRI could have done the same. Rule 1410, South Coast Air Quality Management District, Resolution Number 90, April 1991, <<ftp://ftp.aqmd.gov/outgoing/R1410/>>. [See Pg. 31: alky HF concentration must be >88% in order to prevent undesired products during alkylation. In 1990 Mobil promised to use a MHF with a 50% HF concentration, far too low to function well as a catalyst in the alky unit. In 1994, Mobil promised to use a MHF that had a 70% HF concentration, also far too low. In 1998, Mobil secretly increased HF concentration to 90% (slashing MHF additive to 10%).]
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- ¹⁶ It is interesting to note how many physicists like Kaiser work as "Merchants of Doubt" in efforts to confuse the public about industrial risks. Two of the most famous were Frederick Seitz and Fred Singer who created campaigns to discredit the science on tobacco, acid rain, and the ozone hole, among others. Foundations they created work today to deny global warming. According to Sourcewatch.org, Science Applications International Corporation (SAIC) was founded in 1969 by J. Robert Beyster "and a small group of scientists ... as a scientific consulting firm with a handful of government contracts for nuclear power and nuclear weapons effects study programs. In 1990 SAIC was indicted and pled guilty to 10 felony counts of fraud on a Superfund site, called "one of the largest (cases) of environmental fraud" in Los Angeles history. "SAIC executives have been involved at every stage ... of the war in Iraq," including pushing false WMD claims.
- ¹⁷ Steve Maher established a firm in 1995 to capitalize on his visibility as Safety Advisor. That firm, Risk Management Professionals, was hired by Big West Refinery in 2008 to sell Bakersfield on MHF. He used the same tactic Mobil used during the Consent Decree: invent new dangers for sulfuric acid and significantly understate MHF dangers. At the October 13, 2015 Torrance Community Workshop, Mayer and Kaiser still promoted the same old story about MHF being safer than sulfuric acid, an opinion shared primarily if not exclusively by those who profit from MHF in some way. 2008-05-16 The Big West debate: Who's right? STACEY SHEPARD, Daily Californian, <<http://www.bakersfield.com/news/2008/05/16/the-big-west-debate-who-s-right.html>>.
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