

**33-PAGE AMENDED
CITIZEN PETITION TO THE US EPA ADMINISTRATOR TO
OBJECT TO THE
REGION 9 PERMIT RENEWAL
AS CONSTITUTED ON MAY 28, 2024
FOR THE VALERO ULTRAMAR WILMINGTON HF REFINERY
2402 EAST ANAHEIM STREET, WILMINGTON, CA 90744
AND REQUESTING THAT THE US EPA
REQUIRE NEEDED PERMIT ADDITIONS AND MODIFICATIONS
AS OUTLINED HEREIN**

Submitted by:
Gengmun Eng (“Citizen”)
5215 Lenore St., Torrance, CA 90503
geng001@socal.rr.com
July 13, 2024



South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

Title Page	
Facility ID:	800026
Revision #:	149
Date:	May 28, 2024

FACILITY PERMIT TO OPERATE

**ULTRAMAR INC
2402 E ANAHEIM ST
WILMINGTON, CA 90744**

Submitted to: *US EPA Headquarters (HQ), Attn: Operating Permits Group Leader,
Mail Drop: C-504-01, 109 T.W. Alexander Drive, P.O. Box 12055
RTP Research Triangle Park, NC 27711*

cc: Ultramar, Inc., 2402 E. Anaheim St., Wilmington, CA 90744

*cc: Mr. Gerardo Rios, Air Permits Manager, US EPA Pacific-Southwest Region 9
75 Hawthorne St., San Francisco, CA 9105 {Rios.Gerardo@epa.gov}*

*cc: Dr. Bhaskar Chandan, Senior Air Quality Engineering Manager
The South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765 {BChandan@aqmd.gov}*

ABSTRACT

The Valero Ultramar HF Refinery (Facility ID=800026) is located at 2402 E. Anaheim St., Wilmington, CA, 90744 {"*Refinery*", "*Facility*", or "*Refinery Facility*"}, operated by or under the auspices of Valero Energy Corporation {"*Operator*"}. As this is a *Title-V EPA-Permit Renewal* ("*EPA-Permit*"), the *Refinery Operator* has an extensive EPA-Permit Record, including its communications to various oversight agencies.

Citizen was able to review some of those records, as disclosed through a Public Records Act (PRA) request; and found numerous cases, as outlined in this Petition, where the *Operator* delivered non-compliant documents as if they were compliant to the applicable regulations, including defects such as:

- (i) being incomplete, or
- (ii) being deliberately misleading,

to the point where regulatory agencies are on record as believing in the robust nature of *Refinery Operator* compliance, where in fact Citizen's detailed document review, as outlined herein, shows the opposite may be true.

As a result, Citizen prays the US EPA Administrator {"*Administrator*"} formally object to this 5/28/2024 '*Title-V EPA-Permit Renewal*' {"*EPA-Permit*"} as it is presently constituted (*Version #149*), and that the US EPA Administrator require timely and needed *EPA-Permit* additions and modifications as outlined and proposed herein, in order to be more properly protective of the Public Health and Safety of the people in the Underserved Community of Wilmington, CA 90744, and its surrounding areas.

These proposed additions and modifications are especially needed to better address the ongoing risk to the Public Health and Safety with respect to the Valero Ultramar on-site use and storage of hundreds of thousands of pounds of deadly anhydrous Hydrogen Fluoride (HF) and modified Hydrofluoric Acid (MHF), primarily within their *Refinery Alkylation Unit* and associated *Refinery* structures.

This Amended Petition includes additional Relief sought by Citizen regarding improved assessment, as a function of time, of the amounts of Hydrogen Fluoride (HF) or modified Hydrofluoric Acid (MHF) that are: (I) Incoming or imported into the *Refinery Facility*; (II) Stored on-site at the *Refinery Facility*; (III) In-use in the '*Alkylation and Isomerization Unit*' (A-I-U) and its associated structures at *Refinery Facility*; (IV) Converted at the *Refinery Facility* into other Fluoride-containing materials as *solid waste*; or (V) Escaped from the *Refinery Facility* as fugitive emissions or unaccounted for materials; and better safety assessments of the (A-I-U) and its associated structures, so as to better comply with the Toxic Substances Control Act (TSCA) and Resource Conservation and Recovery Act (RCRA) requirements for concentrated fluorides.

Documents Referenced

Doc-00: Facility ID 800026 *Final-Title-V*: In this Citizen Petition, the “*Final-Title-V*” identifier is used to indicate a hypothetical future document, where all the Citizen elements and concerns herein are taken into account, beyond what was vetted by the US EPA Region 9 in the 'Facility EPA-Permit to Operate (Version #149 of 5-28-2024)', which is called the '*EPA-Permit*' here.

Doc-01: Citizen Emergency Petition to the US EPA Region 9 staff, dated 10 May 2024, appealing SCAQMD 5/28/2024 decision to grant a Valero-Ultramar '*Title-V EPA-Permit Renewal*' {"*EPA-Permit*"}, and further requesting *EPA-Permit* additions and modifications to be properly protective of the Public Health and Safety.

Doc-02: Letter of June 18, 2024 to Citizen from US EPA Region 9 Staff noting that no *EPA-Permit* changes were made, due to Region 9 Staff accepting the *EPA-Permit* as-is, and that Citizen should submit a Petition directly to US EPA Headquarters (HQ).

Doc-03: “40 CFR_Part-70_rev-6-25-2024_84pp.pdf”.

Doc-04: “40 CFR_Part-63-Subpart-UUU_rev-5-02-2024_151pp.pdf”.

Doc-05: “40 CFR_Part-68_55pp.pdf”.

Doc-06: 2021-01-20_US President Executive Order (EO) 13985.

Doc-07: Listing of 145 California Underserved Communities by Zip Code out of 1765 total, as determined by the California Department of Insurance, Structural Analysis Division.

Doc-08: US EPA "Equity Action Plan Summary" in response to U.S. President Executive Order EO-13985.

Doc-09: 1987-11-04_“Conduct of Anhydrous Hydrofluoric Acid Spill Experiments”; D. N. Blewitt and J. F. Yohn, Amoco Corp., Chicago, IL; R. P. Koopman and T. C. Brown, Lawrence Livermore National Laboratory (LLNL), Livermore, CA.

Doc-10: “2018-09-22_GEng_Rainout-plus_to-SCAQMD.pdf”.

Doc-11: “2017-07-21_GEng_Initial-Model_HF-Airborne-Release-and-Rainout-to-SCAQMD.pdf”.

Doc-12: “2019-01-07a_GEng_HF-Clouds_104F-TankBreach.pdf”.

Doc-13: *LAFD-2022* (693-pages, 2022). This “*LAFD-2022*” identifier is used to indicate the 693 page document release from the Los Angeles Fire Department (LAFD) CUPA (Certified Unified Public Agency), containing all the *Refinery* – CUPA written communications in their records. Citizen notes that this document release by the CUPA overseeing the *Refinery* Facility was the result of a PRA (Public Records Act) request by the Torrance *Refinery* Action Alliance (TRAA).

Doc-14: *LAFD-2022a* (10-pages, 2022). Citizen extracted 10 pages from the 693-page “*LAFD-2022*” highlighting various insufficiencies. Every insufficiency is a defect or flaw in the *EPA-Permit* Record, or the *EPA-Permit* Process. As such this Citizen Petition prays that the US EPA Administrator request and require all identified defects and flaws to be corrected, prior to issuance of a *Final-Title-V*.

Doc-15: Facility ID 800026 Title-V 'Facility EPA-Permit to Operate (Draft)' {"*Draft-Title-V*"} 1381 pages.

Doc-16: Facility ID 800026 Title-V 'Facility EPA-Permit to Operate (Version #149 of 5-28-2024)' from the US EPA Region 9 {"*EPA-Permit*"} 1369 pages.

Doc-17: 2024-05-05_“GEng_HF-Alkylation_is-part of Catalytic-Reforming.pdf”.

Doc-18: SCAQMD Detailed Responses to Citizen and TRAA President Mr. Steve Goldsmith with respect to their objections and concerns regarding the *Draft-Title-V*. SCAQMD noted their decision was that no *EPA-Permit* changes were being made in spite of Citizen and TRAA objections and concerns (19 pp.).

PREFACE: On or about 10 May 2024, Citizen filed an Emergency Petition to the US EPA Region 9 staff, appealing the original SCAQMD 5/28/2024 decision to grant a Valero-Ultramar "Title-V EPA-Permit Renewal" {"EPA-Permit"}; and further requesting EPA-Permit additions and modifications to be properly protective of the Public Health and Safety {Doc-01}. Citizen then received the following 18 June 2024 letter {Doc-02} from US EPA Region 9 Staff noting that no EPA-Permit changes were made, due to Region 9 Staff accepting the EPA-Permit as-is, and that Citizen should submit a Petition directly to:

*US EPA Headquarters (HQ), Attn: Operating Permits Group Leader,
Mail Drop: C-504-01, 109 T.W. Alexander Drive, P.O. Box 12055
RTP Research Triangle Park, NC 27711*



June 18, 2024

Genghmun Eng
5215 Lenore Street
Torrance, California 90503

Via electronic mail

Dear Genghmun Eng,

Thank you for submitting your "Emergency Petition to the US EPA for Timely and Needed Additions and Modifications to the Proposed Title V Permit Renewal for the Valero Ultramar HF Refinery" to EPA Region 9 for the Ultramar, Inc – Valero Wilmington Refinery 800026 title V permit renewal. We received your submission at the San Francisco office on May 15, 2024, during our 45-day review period (April 5 to May 20, 2024).

Because EPA Region 9 did not object to the permit, the public has 60 days to submit a petition to the EPA Administrator requesting that EPA object to the permit. We encourage you to submit a petition directly to EPA Headquarters (HQ) as we are currently in the petition period (which runs from May 21 to July 18, 2024). Any petition requesting the Administrator's objection must be submitted directly to HQ using one of the three methods identified on EPA's website, <https://www.epa.gov/title-v-operating-permits/title-v-petitions>.

Before submitting a petition, we encourage you to review 40 CFR 70.12 for the public petition requirements. Additionally, citizen petitions have special rules, which are contained in Clean Air Act Section 505(b)(2) and EPA's regulations at 40 CFR sections 70.8(d), 70.12, and 70.14. Among other requirements, any issue raised in the petition as grounds for an objection must be based on a claim that the permit, permit record, or permit process is not in compliance with applicable requirements of the Clean Air Act or the regulations in 40 CFR part 70. Please note that we cannot object to a permit based on concerns about health and safety that are not related to a Clean Air Act requirement. EPA's rules can be found at <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-70>.

If you have a question about how to file a petition, please email titleVpetitions@epa.gov. If you have questions about the specific permit submittal in EPS, please contact Nidia K. Trejo at (415) 972-3968 or email R9AirPermits@epa.gov.

Sincerely,

**PO-CHIEH
TING**

Digitally signed by
PO-CHIEH TING
Date: 2024.06.18
10:14:52 -07'00'

Po-Chieh Ting
Acting Manager on behalf of

Gerardo C. Rios, PE
Manager, Air Permits Section
Air and Radiation Division

cc (via email):

Bhaskar Chandan, SCAQMD Senior Air Quality Engineering Manager, bchandand@aqmd.gov
Steven Goldsmith, President, Torrance Refinery Action Alliance, sgoldsmith84@gmail.com

Citizen Petition: Background and Citizen Claims for Relief

Each Citizen Claim Background, Claim Details, and Relief Sought, are detailed individually next.

Claim_01: Applicability of 40 CFR Part-63 Subpart-UUU and 40 CFR Part-68

Claim_01 Background: Regarding Citizen Petition seeking the US EPA Administrator object to the *EPA-Permit* as presently constituted, Region 9 Staff noted that: *"..any issue raised in the petition as grounds for an objection must be on a claim that the Permit, Permit Record, or Permit Process is not in compliance with the applicable requirements of the Clean Air Act {"CAA"} or the regulations in 40 CFR part 70." {Doc-02}.*

Claim_01 Details: Citizen claims Region 9 Staff erred in narrowing the applicable requirements to only the CAA or 40 CFR Part-70 {Doc-03}; and that the *EPA-Permit* needs to also require adherence to also include other portions of 40 CFR, such as 40 CFR Part-63 Subpart-UUU {Doc-04}, and 40 CFR Part-68 {Doc-05}.

Claim_01 Relief Sought: Citizen prays the US EPA Administrator require *EPA-Permit* changes and modifications to be in compliance, especially with 40 CFR Part-63 Subpart-UUU, among other sections, in manner as detailed in here in further **Claims**.

Claim_02: Applicability of US President Executive Order 13985

Claim_02 Background: On 20 January 2021, the Office of the US President issued Executive Order (EO) 13985 {Doc-06} entitled:

"Advancing Racial Equity and Support for Underserved Communities Through the Federal Government."

which mandates special considerations for Underserved Communities by Federal Agencies, which includes the US EPA. In particular, EO-13985 Section 6 states:

"The Federal Government should, consistent with applicable law, allocate resources to address the historic failure to invest sufficiently, justly, and equally in Underserved Communities, as well as individuals from those communities."

Furthermore, this particular Valero-Ultramar HF Refinery operates within Zip Code 90744, which is one of the 145 (out of 1765 total, only 8.2%) California Zip Codes identified in 2015 by the California Department of Insurance as an Underserved Community {Doc-07}.

As such, the Public in this Underserved Community requires and deserves special consideration from the US EPA, with regards to the Valero-Ultramar HF Refinery operation, above and beyond what the US EPA Region 9 Staff noted to Citizen Citizen {Doc-02} in its 18 June 2024 Letter:

"..any issue raised in the petition as grounds for an objection must be on a claim that the Permit, Permit Record, or Permit Process is not in compliance with the applicable requirements of the Clean Air Act {"CAA"} or the regulations in 40 CFR part 70 ... Please note that we cannot object to a Permit based on concerns about health and safety that are not related to a Clean Air Act requirement."

Claim_02a Details: Citizen claims Region 9 Staff erred in narrowing the applicable requirements to only the CAA or 40 CFR Part-70. Citizen claims that the *EPA-Permit* needs to also adhere to additional 40 CFR requirements besides just 40 CFR Part-70, including 40 CFR Part-63 Subpart-UUU applicability of to the *Refinery 'Alkylation and Isomerization Unit'* (A-I-U) and associated *Refinery* structures as detailed further in the follow-on **Claim_09**.

Claim_02b Details: Citizen claims Region 9 Staff erred in their belief that the US EPA “cannot object to a Permit based on concerns about health and safety that are not related to a Clean Air Act requirement” because the new EO-13985 requirement goes beyond the Clean Air Act (CAA), which Citizen claims that the CAA only specifies a set of **minimum** possible requirements.

Citizen further claims that both the SCAQMD and US EPA Region 9 erred in not demanding or requiring specific *EPA-Permit* changes and modifications to address this new EO-13985 requirement, as compared to the prior renewal period, when this requirement was not present.

Furthermore, as a result of EO-13985, the US EPA formulated its "Equity Action Plan Summary" {Doc-08}, where its first sentence says "*The Environmental Protection Agency's (EPA) is to protect human health and the environment.*" Citizen finds this broad mandate for Underserved Communities supersedes the Region 9 Staff ignoring human 'health and safety'.

Claim_02 Relief Sought: Citizen prays the US EPA Administrator allow, enable, and require *EPA-Permit* changes and modifications, as special considerations for the Underserved Community of Wilmington, CA 90744, in compliance EO-13985, including new explicit provisions that help to enhance and further protect human 'health and safety' in the Underserved Community of Wilmington, CA, which surrounds the Valero-Ultramar Wilmington HF Refinery, as further detailed in herein, including specifically the follow-on **Claim_03** next.

Claim_03: EO-13985 Requires Better Adjudication of HF/MHF Risks

Claim_03 Background, Part 1: Citizen finds that one of the largest Public Health and Safety concerns for the Wilmington Underserved Community is the possibility of an accidental Catastrophic release of massive amounts of deadly anhydrous Hydrogen Fluoride (HF) and/or modified Hydrofluoric Acid (MHF), from their *Refinery 'Alkylation and Isomerization Unit' (A-I-U)* and associated *Refinery* structures, or their on-site HF/MHF storage, which can be in the hundreds of thousands of pounds.

Only 2 of 17 California Refineries or about 12% operate with an HF/MHF Alkylation process, in contrast to about 50 of 125 (40%) for the whole USA. However, sorting HF Refineries by population-at-risk in a Catastrophic HF/MHF release scenario, the SCAQMD found the two California HF Refineries are #1 and #2 in the nation, so that the cost to human lives and injuries could be the largest.

The HF alkylation process started in 1966 at Torrance and 1969 at Wilmington, long after the region had nearly fully developed nearby neighborhoods. However all HF Refineries initially used an accidental release Model where all large-scale HF releases would all fall to the ground as 'rainout', and thereby be rendered harmless. Small-scale laboratory testing of HF releases under various laboratory conditions could always be impugned as not being representative of the *Refinery* Alkylation process. So, this 'rainout' model could never be tested without a large-scale HF release.

Finally, in 1986, Amoco Oil Co., in with Dr. Ronald Koopman of Lawrence Livermore National Laboratory (LLNL) performed a large-scale test of this 'rainout' model, using a controlled release of ~1000 gallons (~8300 pounds) of HF in the Nevada Desert, laying out collection pans all along the expected HF release path, to capture and measure the 'rainout' amount {Doc-09}. Instead of 'rainout', the HF release formed an unexpected ground-hugging toxic cloud that rolled on for miles, which would have been toxic by inhalation to humans within 10 minutes, 2-3 miles away. The 'rainout' model that was the basis of HF Safety for large-scale HF releases was proven to be 100% wrong {Doc-10, p.3}.

1986 Pure HF Release Test in Nevada Desert

8300 lbs HF Release at 104°F ≈ 3764.82 Kg ≈ 3986.28 Liters (orig. liquid)
<http://www.aristatek.com/newsletter/0602February/PeekAtPeac.aspx>



Figure 2 – Goldfish Series Anhydrous Hydrogen Fluoride release at HSC

“The assumption.. was that any HF released.. would stay in liquid form and could be captured on site. 'None of the HF was collected as a liquid', said [Ron] Koopman [Livermore Lab Physicist who oversaw test]”.*

* <https://www.publicintegrity.org/2011/02/24/2118/use-toxic-acid-puts-millions-risk>

Citizen has studied the likely reasons why a ground-hugging HF Cloud formed in the Nevada Desert test, using known and available properties of AHF (Anhydrous Hydrofluoric Acid), HF (hydrogen fluoride), HFA (standard Hydrofluoric Acid being a mixture of HF and water), and MHF (modified Hydrofluoric Acid, principally composed of pressurized and Anhydrous HF mixed with additives, primarily 10 wt% Sulfolane) {Doc-10, Doc-11, Doc-12}.

Citizen finds that even the high temperature dry Nevada Desert, there is still enough residual water-vapor molecules in the air to react with every HF molecule exiting during an HF/MHF Tank Breach, so as to form an HFA *Condensation Fog*; similar to why people 'see their breath' when exhaling into ambient cold-air, which forms a water-vapor *Condensation Fog* {Doc-11, p.4}.

Example of an Exiting Vapor Forming *Condensation Fog*



<http://blogs.nbc12.com/weather/2015/02/why-do-we-see-our-breath-when-its-cold.html>

“Why do we see our breath when it's cold out? Our lungs and mouths are filled with moisture .. some of this moisture exits in the form of water vapor. When the air temperature is cold enough, this vapor is forced to change from a gas into tiny liquid droplets [via] condensation.”

Meteorologist Matt Holiner (2/6/2015)

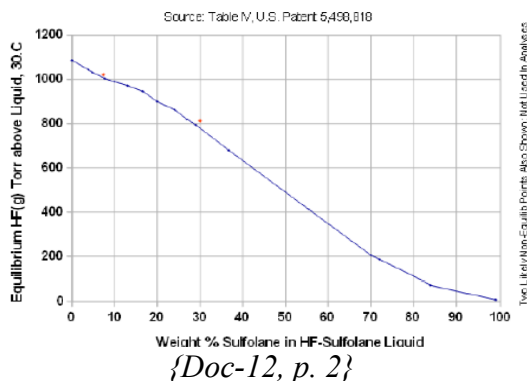
When the In-Tank HF(ℓ) is warmer than ambient, HF(g) exiting from a Tank-Breach can quickly form an HF(ℓ) *Condensation Fog*

In addition, the likely first reaction of an exiting HF molecule or HF molecular cluster would be to quickly form the HF-Water Azeotrope (HFZ) of HOH-HF-HOH = H₃(OH)₂F {Doc-10, p.9}.

Citizen was able to use: [I] The Philips US Patent #5,498,818 disclosed information HF-Sulfolane mixtures; [II] Antoine equations, which is a class of semi-empirical *correlations describing the relation between vapor pressure and temperature* for pure substances; [III] The properties of HFA, which are known over a wide range of temperatures and pressures; and [IV] Conformal Mapping Mathematics; to develop a quantitative model for HF/MHF Tank Breaches involving the *Refinery 50,000 lb HF/MHF Settler Tanks*, where Isobutane and HF/MHF are allowed to settle out. The in-tank Isobutane forms an overlayer over the HF/MHF mixture, allowing recovery and recycling of the HF/MHF mixture.

Key Calibrations Needed for an HF Tank-Breach Model

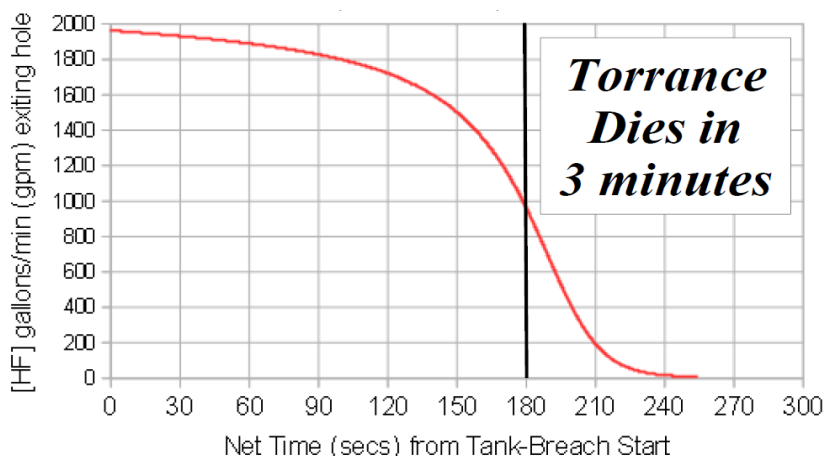
- **Antoine Equations for MHF can be estimated by scaling the known known MHF Patent data vs composition at 30.C, with the known Hydrofluoric Acid data over all compositions and temperatures.**



Citizen found that if Tank Breach occurs at or near the bottom of the *Settler Tank*, the Tank Breach outflow will be primarily governed by the Isobutane vapor pressure forcing the HF/MHF liquid out of the Tank bottom. Thus, the vapor pressure lowering effects of the Sulfolane additive to HF, which creates the MHF, is only a small correction compared to the Isobutane vapor-pressure.

Citizen HF/MHF Tank Breach Modeling due to a pipe break of area 40 sq.cm {Doc-10, p.5} gave:

HF-Cloud from 40 cm² Tank Breach at Bottom (96% full with MHF)
104°F Tank Breach: Anhydrous [HF] with 6 wt% Sulfolane plus 3 wt% Liquid Hydrocarbon overlayer of Isobutane



- **Time to empty 50,000 lb [HF] Tank given present In-Tank materials.**
 {Doc-12, p.6}

The Valero-Ultramar *Refinery* would likely have similar A-I-U conditions. This Figure sets a time-scale for the needed Emergency Response for the case of a Catastrophic HF/MHF release.

In addition, the SCAQMD disclosed that the normal A-I-U process has a continuous flow of HF/MHF and Isobutane mixtures which are pressurized to about 225 psig, which actually could result in an even faster emptying out of the Settler Tank. It means that the real worst-case A-I-U scenario would be worse than predicted by the above graphic, for a Tank Breach where this pressurization is not shut-off.

This fact is now beyond reasonable doubt: Catastrophic Category-4 HF/MHF Releases will result in extreme offsite consequences with a likely large toll in loss of human life, and great human injury. In this case, absent an 'Act of God', it is not clear whether any ERM (Emergency Response Manual) or ERP (Emergency Response Plan), or any amount of coordination or pre-coordination with outside agencies could prevent massive injury and loss of human life in the event of a Catastrophic Category-4 HF/MHF Release. However, with a robust ERM and ERP and coordination and pre-coordination with outside agencies may reduce the amount of injury and loss of human life in such an event from being 'Catastrophic' to only being 'massive'. The US EPA itself and the US Chemical Safety Board (CSB) has acknowledged the existence of this existential risk.

Claim_03a Details: Citizen finds that both the SCAQMD and US EPA erred in the *EPA-Permit*, which is an *EPA-Permit Renewal*, by having no NEW provisions as special considerations for the Underserved Community of Wilmington, CA 90744, in compliance EO-13985. Since there are now known, proven, available, and commercially-viable alkylation alternatives that do not require HF/MHF catalysis, both the Valero-Ultramar *Final-Title-V* and the Valero-Ultramar VRRP (Voluntary Risk Reduction Plans) need to include provisions to accommodate this technical advance.

Claim_03b Details: When the *Refinery 'Alkylation and Isomerization Unit'* (A-I-U) HF Alkylation Units were first installed in Los Angeles County (*1966 Mobil Torrance Refinery, 1969 Wilmington Refinery*), as add-ons to the pre-existing original *Refinery* operations, the prevailing *Refinery* A-I-U Health and Safety model was that was **assumed** by the *Refinery Operators* was that any large-scale HF releases would result in the exiting HF falling to the ground as 'rainout', and thereby rendered harmless.

The concepts (a) of the HF release becoming 'rainout', i.e. falling to the ground, and (b) that released HF material merely hitting the ground would suddenly render the HF harmless; were both used as justification for the complete safety to the Public from any possible HF release impacts.

After the large-scale test of this 'rainout' model in the Nevada desert by Amoco Oil Co. and LLNL in 1986 experimentally proved that this 'rainout' model was 100% wrong, and that a large-scale ground-hugging toxic HF-cloud formed instead, which remained deadly to humans miles away within minutes, demonstrating that massive HF releases were a catastrophic hazard to Public Health and Safety; Citizen claims that the US EPA should have immediately begun the path to phase-out of massive HF use in *Refinery 'Alkylation and Isomerization Unit'* (A-I-U) HF Alkylation Units back then, and the US EPA erred in not doing so. Citizen further claims that this original US EPA error persists to this day.

In the 38 years since those 1986 tests, the viable and commercially-proven alternative of Ionic Liquid Alkylation has been fully demonstrated. Citizen claims that it is time for the US EPA to begin to correct this historical wrong, especially for the Underserved Community around the Valero-Ultramar HF Refinery in Wilmington, CA 90744, by having additional *Final-Title-V* conditions and enhanced Valero-Ultramar VRRP (Voluntary Risk Reduction Plans) that include provisions leading to the eventual phase out of HF/MHF Alkylation at this site, as well as these additional *Final-Title-V* conditions and enhanced Valero-Ultramar VRRP (Voluntary Risk Reduction Plans) being an appropriate US EPA Environmental Justice response that in accordance with the recent US President EO-13985 mandates.

Claim_03c Details: Citizen further claims that the present Valero-Ultramar General Insurance amount of only \$1,000,000 per event is nowhere near sufficient to cover a Catastrophic Category-4 HF/MHF Release event, so that an additional Surety Bond is needed {Doc-14, p.2}.

ULTRAMAR-VALERO CERTIFICATION OF FINANCIAL RESPONSIBILITY GENERAL COMMERCIAL LIABILITY {p. 567 of 693} LIMIT OF \$1,000,000 PER OCCURRENCE

ACORD		CERTIFICATE OF LIABILITY INSURANCE		DATE:MM/DD/YYYY 04/26/21		
THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.						
IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).						
PRODUCER Ace Risk Services Southwest, Inc. Houston TX OFFICE 5555 San Felipe Suite 1500 Houston TX 77056 USA	CONTACT NAME: PHONE (661) 281-7177 FAX (661) 281-8105 E-MAIL ADDRESS:					
WAIVED Ultramar, Inc. One Valero Way 248 Ancker's Dr TX 78249 USA	INSURER(S) AFFORDING COVERAGE INSURER A: ACE American Insurance Company 22467 INSURER B: INSURER C: INSURER D: INSURER E:					
COVERAGES CERTIFICATE NUMBER: 07006827842 REVISION NUMBER:						
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested						
NO. OF	TYPE OF INSURANCE	ADDRESS (LOCAL TAG)	POLICY NUMBER	POLICY EFF. DATE	POLICY EXPI. DATE	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> FIDELITY & SURETY <input checked="" type="checkbox"/> COLLISION GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> BLOC <input type="checkbox"/> LOC <input type="checkbox"/> OTHER		XSC627865082 SER applies per policy terms & conditions	05/01/2017	05/01/2018	EACH OCCURRENCE \$1,000,000 COVERED TO RETIREE PREFERRED ORGANIZATION MED COP (Any one person) PERSONAL & ADVERTISING \$1,000,000 GENERAL AGGREGATE \$3,000,000 PRODUCTS - COMPLET AGG \$3,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> TRIP <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> UNPOWERED <input type="checkbox"/> AUTOS-ONLY		ISA 06055256	05/01/2017	05/01/2018	COMBINED SINGLE LIMIT (As described) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input checked="" type="checkbox"/> UMBRELLA LIMB <input type="checkbox"/> EXCESS/LIMB <input checked="" type="checkbox"/> IS TERTIARY <input type="checkbox"/> IS AMBLESIDE		PSL627865082 SER applies per policy terms & conditions	05/01/2017	05/01/2018	EACH OCCURRENCE \$2,000,000 AGGREGATE \$2,000,000
A	<input checked="" type="checkbox"/> EMPLOYERS COMPENSATION AND EMPLOYERS LIABILITY ADVISORY: EMPLOYER/EMPLOYEE/EMPLOYEE'S DEPENDENT'S EMPLOYMENT EXCLUDED (Monetary limit only) From description under DESCRIPTION OF OPERATIONS below		MLR149115824 SOPC19113994	05/01/2017 05/01/2017	05/01/2018 05/01/2018	<input checked="" type="checkbox"/> SICK LEAVE <input type="checkbox"/> OTHER <input type="checkbox"/> RISK MANAGEMENT \$1,000,000 EL - DISEASE/EMPLOYEE \$1,000,000 EL - DISEASE/POLICY LIMIT \$1,000,000
DESCRIPTION OF OPERATIONS (LISTATIONS) VEHICLES (AGRICULT, Agricultural, Marine, Airborne, Motor, Heavy, or Special) (Mark spaces as follows) SER applies per terms and conditions of the policy. Cancellation provision shown herein is subject to shorter or longer time periods depending on the jurisdiction of, and reason for, the cancellation.						
CERTIFICATE HOLDER				CANCELLATION		
State of California State of Water Resources Control Board Attn: Division of Financial Assistance PO Box 314112 SACRAMENTO CA 95844-2120 USA				SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Ace Risk Services Southwest, Inc.</i>		

Holder Identifier: 07006827842 Certificate No.: 07006827842

Claim_03a and Claim_03b Relief Sought: Citizen prays the US EPA Administrator allow, enable, and require *EPA-Permit* changes and modifications, as special considerations for the Underserved Community of Wilmington, CA 90744, in compliance EO-13985; including an updated Valero-Ultramar RMP (Risk Management Plan) as part of an updated Risk Management Program; as well having an updated RRP (Risk Reduction Plan) as part of an updated Risk Reduction Program; with this RMP and RRP development leading to the standing up an Alternative Alkylation Technology (AAT) Pilot Plant at the Valero-Ultramar HF Refinery during this 2024-2029 *Final-Title-V* period, with the needed planning also completed so as to enable a full HF/MHF Phase-out in the follow-on 2030-2035 *Title-V* period, including the elements as detailed next.

Presently, "Section D: Facility Description and Equipment Specific Conditions", paragraph *F24.1(a)*, notes the following {*Draft-Title-V*, p. 164 of 1381; *EPA-Permit*, p. 162 of 1369}:

F24.1(a): The Operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 .. including the registration and submission of a Risk Management Plan (RMP).

Its follow-on paragraph *F24.1(b)* should be relabeled *F24.1(d)*, so as to remain as the final Section *F24.1* item, with these new paragraphs added:

F24.1(b): The Refinery Facility Operator, as part of their RMP, shall maintain and upgrade their Refinery Facility Emergency Response Manual [ERM] for Corrosive Chemical Releases, including HF/MHF up through Category-4 ("Catastrophic") with off-site impacts.

F24.1(c): Because a Category-4 ("Catastrophic") HF/MHF release with off-site impacts will likely result in offsite injury or death, and given the advent of multiple commercially proven Alternative Alkylation Technologies (AAT), the Operator, as part of their ongoing Risk Reduction Program (RRP) shall:

F24.1(c)(1): Select an non-HF/MHF Alternative Alkylation Technology (AAT) within the 2024-2029 five-year Final-Title-V period, or earlier.

F24.1(c)(2): Construct and make operational an on-site Pilot Plant demonstrating Operator ability to successfully perform large-scale alkylation using this AAT within this 2024-2029 5-year Title-V Permit period or earlier.

F24.1(c)(3): Complete planning, vetted through the SCAQMD within the 2024-2029 five-year Final-Title-V period, for full phase-out of HF/MHF usage within the follow-on 2030-2035 Title-V timeframe, or earlier.

F24.1(d): While a Catastrophic Category-4 HF/MHF off-site release may be unlikely, its economic and human and medical impact may be vast. Since the Operator is an LLC (Limited Liability Corporation), additional financial security needs to be provided to be provided to the public-at-large in case of such an event. Therefore, this period of Refinery Operator continued use of HF/MHF Alkylation needs to be supported by the LLC Operator posting a \$1 billion Surety Bond with the City of Los Angeles, using an independent insurer vetted by the City of Los Angeles as capable of paying for human, medical, and property damages, in the unlikely event of such a scenario occurring, in order to mitigate the Public Health and Safety impacts of a Refinery 'Category-4' Catastrophic HF/MHF release.

Claim_04: Continued *Refinery* HF/MHF Use Needs to be put under TSCA and RCRA

Claim_04 Background: Hydrogen Fluoride (HF) in all its forms, including Anhydrous Hydrogen Fluoride (AHF), Hydrofluoric Acid (HFA), and Modified Hydrofluoric Acid (MHF) are all toxic chemicals. As noted in:

<https://www.epa.gov/sites/default/files/2013-09/documents/citizens-guide.pdf>

"The purpose of the Toxic Substances Control Act (TSCA) is to safeguard against unreasonable risks of harm to our health or the environment from toxic chemicals. TSCA does this by regulating the use, storage, and disposal of toxic chemicals."

"The Resource Conservation and Recovery Act (RCRA) protects our land as a valuable natural resource by reducing land disposal of hazardous wastes and by minimizing the risks posed by hazardous waste disposal. RCRA authorizes EPA to regulate hazardous wastes from "cradle to grave" (that is, from the point of generation to the point of disposal). Most notably, RCRA authorizes EPA to impose stringent requirements on facilities that treat, store, or dispose of hazardous waste by means of a permit program."

Claim_04 Details: Citizen claims that importing massive quantities of HF/MHF onto the *Refinery Operator* site poses a potentially unreasonable risks of harm to our health and the environment, due to the possibility large-scale HF/MHF release accidents forming ground-hugging toxic clouds. Thus the present *EPA-Permit* needs to have additional sections added to it, that go beyond the requirements of the Clean Air Act, and US President EO-13985, so as to conform to the TSCA and RCRA.

In particular, vetting the ongoing safety of the HF/MHF Settler Tanks, HF/MHF Storage Tanks, HF/MHF piping, and the whole 'Alkylation and Isomerization Unit' (A-I-U), and its associated *Refinery* structures to be done on an ongoing basis, with specific examination of all HF/MHF piping for thinning creating sensitivity for breakage, and specific examination of all flange connections for incipient leakage.

The *EPA-Permit* needs further sections added to it which specifically address the ongoing importation of HF/MHF onto the *Refinery* site, and to track in detail, by mass conservation, what the final "cradle to grave" disposition is for, all the fluorine atoms from the originally imported HF/MHF, and to also fully assay all fluoride waste streams and fluoride waste materials what fluoride chemicals are present, and their amounts, as well as a full assay for other hazardous non-fluoride materials that are present, and their amounts. These sections are needed in this *EPA-Permit* to conform to TSCA and RCRA requirements for the use, storage, treatment, and ultimate disposal of all HF/MHF brought onto the *Refinery Operator* site, to ensure ongoing Public Health and Safety from these toxic chemicals.

Claim_04 Relief Sought:

[Relief_04a] Sections need to be added to this *EPA-Permit* to bring under *EPA-Permit* control and specification all of the HF/MHF Settler Tanks, HF/MHF Storage Tanks, HF/MHF piping, and the whole 'Alkylation and Isomerization Unit' (A-I-U), with its associated *Refinery* structures; including what HF/MHF specific hardware safety and inspection metrics are needed that are different from the other *Refinery* structures, due to the materials in the A-I-U being mainly Monel(R), which is a nickel-copper alloy, instead of being a steel. The potential for HF/MHF corrosion of *Refinery* structures is different, because the acidity of the HF/MHF

creates different behaviors compared to the *Refinery FCCU (Fluidized Catalytic Converter Unit)*, which primarily handles crude and partially refined olefins.

Thus, *EPA-Permit* sections are needed that require yearly inspection of all Monel(R) pipes, tanks, flanges, and elbows to track wall thinning, and establish acceptance criteria vetted through the SCAQMD for when those pipes, tanks, flanges, and elbows need to be replaced.

[Relief_04b] Sections also need to be added to this *EPA-Permit* to bring the *Refinery Operator* under *EPA-Permit* control and specification to ensure proper *Refinery Operator* “cradle to grave” responsibility for all Fluoride-containing materials brought onto the *Refinery* site, or already present at the *Refinery* site, including Hydrogen Fluoride (HF), Anhydrous Hydrogen Fluoride (AHF), Hydrofluoric Acid (HFA), and Modified Hydrofluoric Acid (MHF).

Citizen seeks improved assessment, as a function of time, of all the amounts of Hydrogen Fluoride (HF) or Modified Hydrofluoric Acid (MHF) that are in each category: (I) Incoming or imported into the *Refinery Facility*; (II) Stored on-site at the *Refinery Facility*; (III) In-use in the 'Alkylation and Isomerization Unit' and its associated structures at *Refinery Facility*; (IV) Converted at the *Refinery Facility* into other Fluoride-containing materials as *solid waste*; or (V) Escaped from the *Refinery Facility* as fugitive emissions or unaccounted for materials.

As concentrated levels of fluoride can be toxic to humans, this 'mass balance' for Fluorine atoms needs to be updated, with monthly reports to the SCAQMD, and releasable to the Public, so that both the Public and the SCAQMD can have increased confidence that the above (V) category is minimal, or to quickly identify when it is not. The SCAQMD should also be empowered to vet and validate the validity of all *Refinery* assessments in these different (I)-(V) categories, so as to be able to independently assess the accuracy of the *Refinery* reporting.

Claim_05 through Claim_16: Enhanced Valero-Ultramar RMPs and RRP's Needed

Claim_05 through Claim_16 Background: The LAFD-2022 *{Doc-13}* includes (pp. 312-510 of 693) the Valero-Ultramar "Emergency Response Manual" [ERM], which consists of 10 Parts ("ERM Part-1 – ERM Part-10") and 9 Appendices ("ERM Appendix A – ERM Appendix I"), with Part-1 through Part-5 constituting their "Emergency Response Plans [ERP]". These are only two portions of the entire required Valero-Ultramar Risk Management Program ("RMP"), the rest of which remains undisclosed. However, Citizen has already found numerous defects in those documents, thus Citizen seeks the US-EPA to require appropriate changes, enhancements, and modifications, to the:

- [i] Valero-Ultramar *EPA-Permit*;
- [ii] Valero-Ultramar ERM and its ERP subsections;
- [iii] Valero-Ultramar ongoing "Voluntary Risk Reduction Plans" [VRRP], which is used as part of their required Risk-Reduction Plans ("RRP").

Citizen believes the risks and defects identified require curing and completion prior to granting the Valero-Ultramar *Refinery Final-Title-V*, in order to be properly protective of the Public Health and Safety. The defects found needing curing are summarized as "**Claim_05**" through "**Claim_16**".

Claim_05: Enhanced Report Submittals Needed

Claim_05 Background: Operating a *Refinery* in a manner that is properly protective of the Public Health and Safety requires ongoing attention to Risk Management through a having comprehensive Risk Management Program (RMP) and an ongoing Risk Reduction Program (RRP), which require ongoing updating and upgrading throughout the entire *Final-Title-V* operating period.

Claim_05 Details: The necessity for Valero-Ultramar to operate under a qualified RMP and RRP need to be explicitly called out in the *Final-Title-V*, as part of the "Section E: Administrative Conditions".

Claim_05 Relief Sought: Citizen prays the US EPA Administrator allow, enable, and require *EPA-Permit* changes and modifications, with language and modifications as follows: Under 'Section E: Administrative Conditions', the present "E-12" paragraph [*Draft-Title-V* {p. 353 of 1369} & *EPA-Permit* {p. 355 of 1381}], regarding Report Submittal should have these additional paragraphs added:

E-12: During this Final-Title-V period, Operator shall:

(E-12a) maintain, update, and upgrade their Risk Management Plans (RMP) and Risk Reduction Plans (RRP), and

(E-12b) make electronic copies of the most recent RMP and RRP automatically available to all on-site personnel on computer start-up, and

(E-12c) deliver all updated and upgraded RMP and RRP to the SCAQMD in a timely manner for review and concurrence.

E-13: A special RMP and RRP version, denoted here as "RMP-r" and "RRP-r", shall be delivered to the SCAQMD, with all proprietary, sensitive, and confidential information redacted out, so that these versions can be posted on the SCAQMD website for public comment and review, with such public comments and review handled by the SCAQMD in a manner consistent with their other operations.

E-14: The Operator Emergency Response Manual [ERM] and Emergency Response Plan [ERP], which are parts of the Operator RMP, shall be included as part of the RMP delivery.

(E-14a) An ERM Paper Copy shall be made available in every physical office, for the case of a power-outage emergency.

E-15: The Operator Voluntary Risk Reduction Plans [VRRP] shall be included as part of the RRP delivery.

*{E-16: See 'Relief Sought' in **Claim_09**, as given in paragraphs following.}*

E-17: Defects in the Operator RMP, ERM, ERP and/or RRP identified by the SCAQMD, US EPA, or any other Public Agency, or the Public at large, with concurrence by the SCAQMD, shall be cured in a timely manner, according to a timetable set forth by the SCAQMD for defect curing, and delivered as an RMP or RRP update or upgrade.

(E-17a) All Operator Draft Versions of (E-17) shall be released to the Public for Public Comment, within 2 weeks of the SCAQMD receiving such Operator Draft Versions for compliance with (E-17).

*{E-18: See 'Relief Sought' in **Claim_11** as given in paragraphs following.}*

*{E-19: See 'Relief Sought' in **Claim_12** as given in paragraphs following.}*

E-20: {Present "E-12" paragraph regarding Report Submittal}

Claim_06: Operator ERM/ERP offers virtually no guidance for Category-4 Catastrophic HF/MHF Release Scenario

Claim_06 Background: The Valero-Ultramar ERM details their planned responses to various accident event scenarios, which are separated into the relatively innocuous 'Category-1', through the highest impact 'Catastrophic Category-4'. Properly included in Category-4 is a catastrophic HF/MHF release (LAFD-2022, p. 340 of 693) *{Doc-14, p. 5}*.

A Category-4 catastrophic HF/MHF release is considered by Valero-Ultramar as an event of this type:
"Energy Release: Corrosive Chemical Release".

A catastrophic HF/MHF release accident or scenario is expected to have extreme off-site consequences. The actions to be taken in this case are given in the Valero-Ultramar Emergency Response Plan (ERP) would then be governed by ERP_ Table_ 2-2 (LAFD-2022, p. 344 of 693) *{Doc-143a, p. 6}* as follows:

VALERO-WILMINGTON ERP (Emergency Response Plan), p. 339 of 693

"Category 4 Catastrophic Release"

Activation of emergency alarm

Management and emergency units required

Logistics Dispatcher to notify Los Angeles City Fire Department

Emergency Operations Center will be established.

Corporate Emergency Operations Center will be established.

Catastrophic release that will require internal or external evacuation, community or agency notification, emergency units, and major clean-up effort

Examples of Category 4 Incident are:

- Catastrophic H.F. Acid release **Corrosive Chemical**
- Catastrophic LPG release **Flammable**
- Catastrophic Pipeline rupture with spill **Corrosive or Flammable**
- Catastrophic Oil Spill at Marine Terminal **Flammable**

Representative Actions are listed in Tables 2.1 and 2.2.

{p. 342 of 693} Table 2.1: Flammable Liquid Vapor Release

{p. 343 of 693} Table 2.2: Corrosive Chemical Release

CORROSIVE CHEMICAL RELEASE

UNIT OPERATORS:

1. Report emergency to Lead Process Technicians LPT. Activate Emergency Response Plan.

NOTE: Some corrosive chemicals are not compatible with water.

2. Check MSDS information and know the chemicals in your area.
3. Activate deluge systems if available and safe to do so without protective equipment.
4. Activate fixed monitors to control the release at its source if safe to do so without protective equipment.
5. Evacuate personnel from area.
6. Isolate equipment at a safe distance, if possible. If the area cannot be safely entered by using protective equipment that the operator has been fully trained in its use, then divert the release to a safe containment area or continue dilution of the release using monitor streams.

EDMERT:

1. Position portable monitors for the most effective control of the release at its source.
2. Personnel **trained in HAZMAT response will don the appropriate protective clothing** and attempt to isolate the release. Activities will be restricted to the level of training received including patching/plugging barrels and drums, installing special kits, control and containment of leaks and spills, neutralization, decontamination, etc. The possibilities of other emergencies that may occur are too numerous to discuss in detail. This section was provided to show typical response to the incipient stage of an emergency.

TABLE 2.2

To address this type of 'Catastrophic Category-4' event, the present Valero-Ultramar ERM/ERP appears to have only this 1-page. It contains just 6 items of generic information on what Valero-Ultramar staff and on-site Contractor Personnel might do, during such an accident or scenario with the added caveats: (i) if possible, (ii) if items are available, and (iii) where personnel activities will be restricted to the level of training received. The only other ERP advisement in Table 2-2 is that: "The possibilities of other emergencies that may occur are too numerous to discuss in detail." (LAFD-2022, p. 343 of 693).

Claim_06 Details: Citizen finds that the ERP advisement that: "*The possibilities of other emergencies that may occur are too numerous to discuss in detail*" is wholly inadequate. Thus, Citizen finds that this advisement means that **NO** actual guidance is being provided in the ERM/ERP for catastrophic Category-4 HF/MHF release accidents or scenarios. The *Refinery Operator* needs to cure this serious defect, as part of the *Final-Title-V*, by developing an upgraded RMP, ERP, and ERM in a timely manner that specifically includes Enhanced Guidance for the specific case of a Catastrophic Category 4 HF/MHF release scenario, as that event would constitute a Public Health and Safety Emergency of the highest order. As such, this Enhanced Guidance cannot involve, allow, or be restricted by any *Refinery Operator* claims of proprietary or confidential information, and it must be vetted by the SCAQMD.

Claim_06 Relief Sought: Citizen prays the US EPA Administrator concur with Citizen **Claim_06**, and mandate curing this defect by having the *Final-Title-V* specifically include:

F24.1(e): Because a Catastrophic Category-4 HF/MHF off-site release, although unlikely, can have vast economic and human and medical impacts, a further requirement for issuance of a Final-Title-V Renewal Permit, is that in addition to maintaining and upgrading their Refinery Facility Emergency Response Manual [ERM] for Corrosive Chemical Releases, including HF/MHF up through Category-4 ("Catastrophic") with off-site impacts, the Refinery Operator shall develop upgraded RMPs and ERPs, and ensure their upgraded ERM specifically includes:

F24.1(e)(1): Enhanced Guidance for all Refinery on-site personnel covering this case of a Catastrophic Category 4 HF/MHF release scenario with off-site impacts and make it available to all Refinery on-site personnel.

F24.1(e)(2): Enhanced Guidance for outside agencies, on what pre-coordination is needed prior a Catastrophic Category 4 HF/MHF release with off-site impacts scenario.

F24.1(e)(3): Enhanced Guidance for outside agencies, on what coordination should be done in the event of a Catastrophic Category 4 HF/MHF release scenario with off-site impacts, and what response time-scales are needed to minimize human injury and/or loss of life.

F24.1(e)(4): The Enhanced Guidance for F24.1(e)(1) through F24.1(e)(3) shall be developed with a time-scale resolution of no coarser than a 10 second interval, and cover a period no smaller than 20 minutes (120 entries for Enhanced Guidance).

F24.1(e)(5): Plan and develop a triple-redundant fail-safe system to detect HF/MHF Tank Breaches by the Refinery Operator.

F24.1(f): Because a Catastrophic Category 4 HF/MHF release scenario with off-site impacts constitutes an extreme Public Health and Safety Emergency, the upgraded ERMs, RMPs, ERPs, and the Enhanced Guidance documents of F24.1(e)(1)-F24.1(e)(4), along with details of how the F21.1(e)(5) system operates in a manner that is protective of the Public Health and Safety, shall not be restricted by any Refinery Operator claims of proprietary or confidential information being involved.

F24.1(g): As part of this Final-Title-V Renewal, the Refinery Operator shall deliver all F24.1(b) and F24.1(e) Enhanced Guidance documents and plans to the SCAQMD in a timely manner for vetting and review by the SCAQMD, and require SCAQMD concurrence prior to implementation.

F24.1(h): Because a Catastrophic Category 4 HF/MHF release scenario with off-site impacts constitutes a Public Health and Safety Emergency of the highest order, the SCAQMD shall be allowed to effect full release of all the F24.1(b) and F24.1(e) Enhanced Guidance documents and plans to the Public, so as to allow Public review and Comments in a timely manner to the SCAQMD, as part of achieving SCAQMD concurrence on the robustness of these Refinery Operator ERM, RMP, ERP, and Enhanced Guidance documents and plans.

F24.1(i): {Present "F24.1(b)" paragraph in Draft-Title-V and EPA-Permit.}

Claim_07: Operator ERM/ERP presently offers NO guidance for Category-4 Catastrophic HF/MHF Release Scenario that goes 'Outside the Refinery'.

Claim_07 Background: There is a 100% certainty (not a Claim but a fact) that a Valero-Ultramar Category 4 Catastrophic HF/MHF release scenario will go 'Outside the Refinery'. The Valero-Ultramar ERP details presented in the above **Claim_06 Background** shows that there are no ERP provisions for what coordination with outside agencies, or for what pre-coordination should be done or should have been done, to minimize the injury and loss of human life in a Category 4 Catastrophic HF/MHF release scenario. However, what the *Refinery Operator* presently does have is a 12-page '*Appendix E: Refinery Response Plan*', as part of their EPR (Emergency Response Plan):

Claim_07 Details: Citizen finds that the Valero-Ultramar ERP does not even cover the case of Category 4 Catastrophic HF 'Leaks Outside the Refinery' *{Doc-03; Doc-14, p. 7}*. Furthermore, Citizen claims that, as a companion to the present-day Valero-Ultramar '*Fire Response Plan*', the *Refinery Operator* needs to develop a similar Comprehensive Emergency Response Plan (ERP) for a Category 4 Catastrophic HF/MHF Release *{Doc-14, p. 8}*, and update their ERP with this additional information. See also next page, which reproduces *{Doc-14, p. 7}* and *{Doc-14, p. 8}* regarding these items, as part of these **Claim_07 Details**.

Claim_07 Relief Sought: Citizen prays the US EPA Administrator concur with Citizen **Claim_06**, and **Claim_07**, and mandate that these defect be cured by including the above **Claim_06** language within the *Final-Title-V*, and by requiring the *Refinery Operator* to develop a companion document to their present-day '*Fire Response Plan*', for the case of a Category 4 Catastrophic HF/MHF Release *{Doc-14, p. 8}*.

VALERO-WILMINGTON ERP (Emergency Response Plan), p. 468-479 of 693

Appendix E: REFINERY FIRE RESPONSE PLAN

REFINERY

FIRE PREVENTION PLAN

1.0 GENERAL

- 1.1 This facility is engaged in the refining of crude oil to make a variety of petroleum products including gasoline. Flammable and combustible materials are therefore found throughout the refinery in either processing or storage areas or at loading racks where product is transferred to or from road vehicles. Areas where crude oil or intermediate or final products are present a special ignition hazard and are identified on Figure 1.1 the Refinery Process Area drawing. These areas are hereinafter referred to as "process areas". Other areas of the refinery are referred to as "non-process areas". Non-process areas include office and other buildings found with the non-process areas. Flammable and combustible materials may be found in non-process areas, but the hazard is generally less than that in process areas. Exceptions to this are as follows:

Warehouse - Flammable Gases

Laboratory - Flammable Gases, Liquids

These building areas are subject to similar controls to those for process areas. Conversely, controls may be relaxed in certain buildings within process areas where specifically posted:

- 1.2 This plan addresses process and non-process areas separately. All personnel not normally assigned to process areas should pay particular attention to restrictions on entry into process areas. All potential sources of ignition, including smoking materials, electrical devices and vehicles are prohibited unless specifically authorized under the refinery Hot Work Permit system or specifically exempted from permit requirements. The Safety Department shall be consulted if there is any doubt as to whether or not any item is a potential ignition source.
- 1.3 This Fire Prevention Plan is intended to meet the requirements of Section 3221 of the Cal-OSHA General Industrial Safety Orders. Because fire prevention is such an integral part of the design, operation and maintenance of the refinery, numerous programs and procedures exist to prevent fires. These programs and procedures are incorporated by reference herein.

12 Page Refinery Fire Response Plan

VALERO-ULTRAMAR
NEEDS TO DEVELOP A SIMILARLY
COMPREHENSIVE
RESPONSE PLAN
For a Category 4
Catastrophic H.F. Acid Release

VALERO-ULTRAMAR
APPENDIX I, pp. 490-510
ARE FORMS FOR SITE SAFETY PLANS

PAGE 510 IS LAST PAGE OF
VALERO-ULTRAMAR ERP

VALERO-WILMINGTON ERP (Emergency Response Plan), p. 352 of 693
No ERP for Category 4 Catastrophic HF 'Leaks Outside the Refinery'

2.5 HAZARDOUS MATERIAL LEAKS OUTSIDE THE REFINERY

Objectives

2.5.1 Identify the source and characterize the material.

2.5.2 Notify the appropriate local agencies.

2.5.3 Isolate the source and stop the leakage.

2.5.4 Contain the spill.

2.5.5 Clean-up the spill.

"Category 1 Minor"

Minor spill or leak of Five (5) gallons or less from a Valero owned and operated installation.

Leakage confined to land and not of sufficient quantity to cause a safety hazard or public concern.

"Category 2 Moderate"

Moderate leakage in or near a water way or any leakage of sufficient quantity to require more than a minor clean-up effort

Security will activate management call-out.

EOC members are required to report to the refinery anticipating EOC activation at discretion of the Incident Commander or Refinery Manager

Logistics Dispatcher to notify Los Angeles City Fire Department

"Category 3 Major"

Major Oil Spill or leak in or near a waterway has caused fire or injury or any leakage that has the potential to result in a serious hazard to environment or public.

Security to activate management call-out

Logistics Dispatcher notify Los Angeles City Fire Department

Emergency Operations Center will be established

Corporate Emergency Operations Center notified

NOTE: Appendix-H Located at the back of this ER Plan provides additional response instructions. You may also obtained additional detailed information in the Pipeline Contingency Plan and Marine Terminal Spill Response Manual.

APPENDIX H: HAZARDOUS MATERIALS DECONTAMINATION PLAN
pp. 485-487 of 693

Claim_08: The Refinery Operator does NOT have a comprehensive Risk Management Plan (RMP)

Claim_08 Background: Citizen notes that the "SCAQMD Response A-5" of 4/5/2024 to the original Citizen "Note 5" of 9/4/2023, expresses the present-day SCAQMD belief that *{Doc-13, p. 3 of 19}* that the *Refinery* has a "comprehensive Risk Management Plan (RMP)".

The refinery has a comprehensive Risk Management Plan (RMP) to reduce and prevent accidental chemical releases as required under Section 112(r) of the Clean Air Act (CAA). This RMP is updated and revised every 5 years with the US EPA. Facility Condition F24.1 on Ultramar's Title V Permit requires the facility to comply with the accidental release prevention requirements of Section 112(r).

Claim_08 Details: Citizen finds that the information identified in the above **Claim_06** and **Claim_07** demonstrates that the Valero-Ultramar RMP is nowhere comprehensive. As such, Citizen finds that the SCAQMD erred in stating that the *Refinery* has a "comprehensive Risk Management Plan (RMP)".

Claim_08 Relief Sought: Citizen prays the US EPA Administrator concur with Citizen **Claim_06**, **Claim_07**, **Claim_08**, and mandate the Relief Sought by Citizen in these **Claims**.

Claim_09: 40 CFR Part-63 Subpart-UUU Applies to Alkylation Unit

Claim_09 Background: Both the *{Doc-15}* 1381 page Draft, and the *{Doc-16}* 1369 page properly consider the Catalytic Converter Unit (CCU) transformation of input Crude Oil into *Refinery* Products, such as propane and other alkanes to be part the general process of Catalytic Reforming, which is proper. However, both the Draft and ignore the fact that the entire Valero-Ultramar *Refinery 'Alkylation and Isomerization Unit'* (A-I-U) should be considered as a Catalytic Reforming process, which, in this case, uses Modified Hydrofluoric Acid (MHF) as a catalyst to enable reforming of butanes and isobutanes into more profitable alkanes, such as octane.

The 'Refinery Feedstock' for the CCU is generally crude oil, or desulfurized crude. The 'Refinery Feedstock' for the A-I-U is generally n-butane and isobutane, combined with an MHF catalyst, primarily composed of anhydrous Hydrogen Fluoride (HF) mixed with HF vapor-pressure reducing agents such as Sulfolane (C₄H₈O₂S)


(Definition) 'Refinery Feedstock' [is] a product or combination of products derived from crude oil an destined for further processing other than blending in the refining industry. It is transformed into one or more components and/or finished products. {[http:// www.unescwa.org](http://www.unescwa.org) > sd-glossary > Refinery-Feedstock}.

(Definition) 'Continuous Regeneration Reforming' means a catalytic reforming process characterized by continuous flow of catalyst material through a reactor where it mixes with Feedstock, and a portion of the catalyst is continuously removed and sent to a special regenerator where it is regenerated and continuously recycled back to the reactor. {40 CFR Part-63, Section 63.1579}

(Definition) Monel(R) is a predominately nickel-copper alloy, with composition of approximately 63%-70% Nickel and 28%-34% Copper, along with small amounts of iron, manganese, carbon, and silicon. It is known has excellent corrosion resistance, especially in the presence of Hydrogen Fluoride (HF). However it is also known that the presence of HCl (Hydrogen Chloride) in pipeline streams made from Monel(R) tubing have been observed to be subjected to accelerated Stress-Corrosion Cracking so that HCl control in Monel(R) pipeline systems is important. {see: 'Stress-corrosion Cracking of a Monel 400 Tube' by A. I. Katsamas et al. (2004); [https:// link.springer.com/article/ 10.1361 / 15477020421764](https://link.springer.com/article/10.1361/15477020421764) }.

Stress–corrosion cracking of a monel 400 tube

Peer Reviewed Articles | Published: December 2004
Volume 4, pages 44–50, (2004) [Cite this article](#)



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A. I. Katsamas, G. N. Haidemenopoulos, A. D. Zervaki & I. Melas

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Abstract

A bent Ni–Cu Monel 400 alloy tube, which operated as part of a pipeline in a petrochemical distillery installation, failed by through-thickness cracking. The pipeline was used to carry a stream of gaseous hydrocarbons containing hydrochloric acid (HCl) into a reaction tower. The tower provided a caustic solution (NaOH) to remove HCl from the stream, before the latter was directed to a burner. Metallographic examination showed that the cracks were intergranular and were frequently branched. Although nominal chemical composition of the component was found within the specified range, electron dispersive analysis by X-ray (EDXA) indicated significant segregation of sulfur and chlorine on grain boundaries. Failure was attributed to hypochlorous-acid (HClO)-induced stress-corrosion cracking (SCC). The HClO was formed by the reaction of HCl with atmospheric O₂, and the oxygen entered the tube during shutdowns/startups of the installation. Residual stresses, originating from the in situ bend forming of the tube during assembly of the line, provided a driving force for crack growth, and the segregation of sulfur on grain boundaries enhanced the susceptibility of the material to cracking.

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Claim_09 Details: The Valero-Ultramar *Refinery 'Alkylation and Isomerization Unit'* (A-I-U) is a Catalytic Reforming process. Thus, the entire operation of the Valero-Ultramar A-I-U needs to be mandated to be made compliant with the requirements of 40 CFR_Part-63_Subpart-UUU, with the *Final-Title-V* modified to require compliance to this Federal Regulation.

To provide additional documentation for some of the needed changes, Citizen has also prepared a companion document as part of the present Citizen Petition, entitled: "240505_GEng_HF-Alkylation_is-part of Catalytic-Reforming.pdf" {*Doc-17*}.

Claim_09 Relief Sought: Citizen prays the US EPA Administrator allow, enable, and require changes and modifications, so as to conform to the 40 CFR_Part-63_Subpart-UUU, including those paragraphs Citizen calls out in {*Doc-17*}. Critical to enabling this conforming is that a CMS (Continuous Monitoring System) is required for HCl (Hydrogen Chloride) throughout the A-I-U, with validation that HCl levels nowhere exceed 10 ppmv (10-parts-per-million-by-volume).

As part of the changes and modifications to conform to 40 CFR_Part-63_Subpart-UUU, the following paragraph *E-16* should be added:

E-16: The Refinery Operator shall effect and maintain all Refinery operations according to the requirements of 40 CFR_Part-63_Subpart-UUU. Any and all defects or deficiencies in their 'Catalytic Reforming' operations, with regard to 40 CFR_Part-63_Subpart-UUU, shall be cured by the Operator within one calendar year after initial defect or deficiency identification. In particular, the requirements of 40 CFR_Part-63_Subpart-UUU Table 22 shall apply to all aspects and areas of the Operator Alkylation Unit, where Continuous Monitoring System (CMS) data shall be developed and recorded to demonstrate compliance, with these CMS data made available for review, in a timely manner, to the SCAQMD, and to the Public, through the SCAQMD website.

Claim_10: All on-site personnel should be Qualified Holders of the *Refinery Emergency Response Manual [ERM]*

Claim_10 Background: The Valero-Ultramar Wilmington Refinery has only 4 staff {M. Phair, R. Saint-Laurent, Jason Lee, and H. Pinto} and 4 small organizations {I-&-E-Shop, Safety Library, I.C. Vehicle, and the Primary Emergency Operations Center} as presently qualified to be "Holders of the Emergency Response Manual [ERM]" (LAFD-2022, p. 314 of 693). This defect needs to be cured prior to issuance of the *Final-Title-V*.

Claim_10 Details: Citizen believes that all *Refinery* on-site personnel should have the most recent Valero-Ultramar ERM on their electronic computer desktop, and every office should have its own paper copy, in case computers become unavailable during an emergency, much like the present-day requirements for MSDS/SDS distribution regarding chemical handling.

Claim_10 Relief Sought: Citizen prays the US EPA Administrator mandate above E-14 and E-14(a) of Citizen **Claim_05** as a method to cure this defect.

Claim_11: *Refinery Operator EPA-Permit Record* is NOT in compliance with applicable requirements as evidenced by *Refinery* – CUPA written communications

Claim_11 Background: The Valero-Ultramar information, given to the LAFD as the responsible CUPA (Certified Unified Program Agency) overseeing the operation of the Valero Ultramar Wilmington HF Refinery, as disclosed in LAFD-2022 {*Doc-13, Doc-14*}, is seriously deficient and incomplete.

Claim_11 Details: Citizen claims that because the Valero-Ultramar information, given to the LAFD as the responsible CUPA is seriously deficient and incomplete. Without needed changes and additions to the *Final-Title-V*, these deficiencies and incompleteness would carry over as unneeded and unnecessary continuing risks to the Public Health and Safety, so they need to be cured as part of the *Final-Title-V*.

In particular, this Citizen **Claim_11** finds this substantial flaw in the *EPA-Permit Process*: The *Refinery* staff can devote an arbitrarily large amount of effort to sending CUPA information that *appears*, in a cursory CUPA review, to be in conformance with applicable requirements. Whether the *Refinery* information disclosed to the CUPA is or is not actually complete or fully accurate likely requires a detailed examination of the *Refinery* provided *EPA-Permit Record*. The CUPA, as a single-point receiver of this *Refinery* information, is then a single-point failure for validating whether the *Refinery* provided information as a *EPA-Permit Record* is actually complete or fully accurate, or possibly not. In addition, the CUPA may not have the technical breadth or resources to actually determine the completeness or accuracy whether the *Refinery* provided information as a *EPA-Permit Record*. Citizen therefore finds that:

- [i] Having this single-point failure in the *EPA-Permit Process*, and
- [ii] Having the possibility that the CUPA may not have the technical breadth or resources to actually determine the completeness or accuracy of the *Refinery* provided information as a *EPA-Permit Record*,

both are serious flaws in the *EPA-Permit Process*, which needs to be cured as part of the *Final-Title-V*.

Claim_11 Relief Sought: Citizen prays that as part of the changes and modifications to cure the above identified defect in the *EPA-Permit Process*, the following paragraph *E-18* should be added:

E-18: The Refinery Operator shall continue to send all required Permit Record information to the Los Angeles Fire Department (LAFD) CUPA (Certified Unified Program Agency) for review and possible modification, as part of being properly protective of the Public Health and Safety.

(E-18a) Additionally, a copy of all (E-18) communications shall be sent to the SCAQMD (South Coast Air Quality Management District) as a second Agency with full power of review and modification, in order to be properly protective of the Public Health and Safety.

(E-18b) If any (E-18) communications contain proprietary, sensitive or confidential information, these shall be clearly identified by the Refinery Operator, in both the LAFD-CUPA and SCAQMD versions.

(E-18c) The SCAQMD shall be allowed to post all (E-18) communications on their website, with all Refinery proprietary, sensitive, and confidential information redacted out, so that these versions can be made available for Public Comment and review, with such Public Comments and review handled by the SCAQMD in a manner consistent with their other operations.

Claim_12: Refinery Operator disclosed "Chemical Storage Inventory" constitutes a seriously incomplete and deficient Refinery Operator EPA-Permit Record that needs to be cured prior to issuance of a Final-Title-V.

Claim_12 Background: The Valero-Ultramar information, given to the LAFD as the responsible CUPA (Certified Unified Program Agency) overseeing the operation of the Valero Ultramar Wilmington HF Refinery, as disclosed in LAFD-2022 {Doc-14, Doc-13}, is seriously deficient and incomplete.

In particular, a 55-page 'Ultramar Chemical Inventory' that was sent to the LADF-CUPA as part of the Refinery Operator EPA-Permit Record itself is seriously deficient and incomplete. Extracts from three of those 55-pages were combined in the following graphic {Doc-14, p. 9}, demonstrating several of these serious incompleteness and deficiency items:

From the LAFD CUPA: 55 Page Ultramar Chemical Storage Inventory, pp. 236-293 of 693

City of LOS ANGELES
CALIFORNIA



LOS ANGELES
FIRE DEPARTMENT
200 NORTH MAIN STREET
LOS ANGELES, CA 90012
(213) 676-3630

Hazardous Materials System
BP-8: Computer Listing of Inventory Submitted
Inspection Responsibility: VIU

Business No : FA0019079
First In : 038
Block# :

Printed on: 7/28/2011

Business Name : VALERO WILMINGTON REFINERY	Business Address: 2402 E ANAHEIM ST.	Next Inspection Date: 06/15/2011
Business Owner : ULTRAMAR INC A VALERO COMPANY	WILMINGTON, CA 90744	SIC Code : 2811
On-Site Manager : JASON LEE	Phone # : (562) 491-6608	# of Employees : 440
Emergency Contact : JOHN BRIONES	Phone # : (562) 495-5460 Ext	Sq. Ft. of Facility : N/A
Alt Emergency Contact: JASON LEE	Phone # : (562) 491-6608 Ext	Permit Date : 12/14/2010

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LOCATION: PROCESS AREA 16

NFPA-704: N/A

<u>Chemical Name</u>	<u>HM Type</u>	<u>Max Quantity on Hand</u>	<u>State</u>	<u>Fed Haz Catg.</u>
ALKYLATE <i>Hazard Class:</i> <i>Ingredients</i> ALKYLATE (C7-C12)	PURE	408.00 OTHERS Storage Type: ABOVEGROUND TANK CAS # 64741646	LIQUID	
BUTANE MIXED <i>Hazard Class:</i> <i>Ingredients</i> N-BUTANE ISOBUTANE	PURE	1,257.00 OTHERS Storage Type: OTHER CAS # 106978 75285	LIQUID	
CAUSTIC POTASH WALNUT <i>Hazard Class:</i> <i>Ingredients</i> POTASSIUM HYDROXIDE WATER	PURE	40,000.00 POUNDS Storage Type: STEEL DRUM CAS # 1310583 7732186	SOLID	
HYDROGEN FLUORIDE, ANHYDROUS <i>Hazard Class:</i> <i>Ingredients</i> HYDROGEN FLUORIDE	PURE	POUNDS Storage Type: OTHER CAS # 7684393	GAS	
IPC 6677C ADDITIVE SC-1043 <i>Hazard Class:</i> <i>Ingredients</i> ACRYLAMIDE TRADE SECRET-HAZARDOUS	PURE	240.00 GALLONS Storage Type: ABOVEGROUND TANK CAS #	LIQUID	
IPC 9315 CM ADDITIVE SC-221 <i>Hazard Class:</i> <i>Ingredients</i> SODIUM HYDROXIDE	PURE	1,000.00 GALLONS Storage Type: ABOVEGROUND TANK CAS #	LIQUID	

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Claim_12a Details: Citizen finds the 55-page 'Ultramar Chemical Inventory' is a deficient and incomplete EPA-Permit Record, because of defects in the 'Maximum Quantity On Hand'. Some units, such as 'pounds' or 'gallons' are universally recognized as quantities of matter. But in many cases, the quantity of matter is listed as 'others'. Common sense requires that a '1-pound' unit of a Chemical-A should weigh the same as a '1-pound' unit of Chemical-B, and that the volume of a '1-gallon' unit of a Chemical-C should have the same volume as a '1-gallon' unit of Chemical-D.

However, in the 'Ultramar Chemical Inventory' is that there are multiple instances where the '*Maximum Quantity On Hand*' of a chemical is listed in the quantity unit of '*l-others*'. This unit of '*others*' is not specified as a unit of weight or a unit of volume, which is the first defect. The second defect is that as unit of weight, the quantity of '*l-others*', may actually correspond to a different weights for different chemicals, or the quantity of '*l-others*', as a unit of volume, may actually correspond to different volumes for different chemicals. In both cases, the quantity of '*l-others*' would be inconsistent, and thereby inaccurate. In addition to being a *EPA-Permit Record* defect, the *Refinery Operator* usage of the '*l-others*' unit, as disclosed a 55-page 'Ultramar Chemical Inventory', also violates "Section K(25) {(Permit) Administration}" [*Draft-Title-V* {p. 1352 of 1381} & *EPA-Permit* {p. 1339 of 1369}]:

"All records, reports, and documents required to be submitted by a Title-V Operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000. [3004(a)(12)]"

These defects render the Valero-Ultramar information provided to the LAFD CUPA as the responsible CUPA as deficient and incomplete, to the point that the actual hazard and risks associated with *Refinery* operation cannot be determined the CUPA or any other Agency, based on the *Refinery* information provided to the CUPA, which constitutes a serious risk to the Public Health and Safety.

Claim_12a Relief sought: Citizen prays the above defect needs to be cured prior to the issuance of a *Final-Title-V*, by having the 'Ultramar Chemical Inventory' redone by the *Refinery Operator*, with all chemical quantities listed in standard weight or volume units, with all '*others*' as a mass unit removed.

In addition, Citizen further prays, as part of the *EPA-Permit* changes and modifications to cure the above identified defects in the *EPA-Permit Process* and the *EPA-Permit Record*, that the following paragraph *E-19* be added to the *Final-Title-V*:

E-19: The Refinery Operator prepare an updated Chemical Storage Inventory at least yearly, which shall become part of the Final-Title-V Record information to the Los Angeles Fire Department (LAFD) CUPA (Certified Unified Program Agency) for review and possible modification.

(E-19a) Additionally, a copy shall be sent to the SCAQMD (South Coast Air Quality Management District)

as a second Agency with full power of review and modification.

(E-19b) The SCAQMD shall be allowed to post all (E-19) material for Public Comment and review, with such Public Comments and review handled by the SCAQMD in a manner consistent with their other operations.

Claim_12b Details: Citizen finds that the disclosed 55-page 'Ultramar Chemical Inventory' is a deficient and incomplete *EPA-Permit Record*, because many listed chemicals with a proper unit of quantity, such as '*pounds*' or '*gallons*', have an amount that is BLANK. As shown in the above graphic {*Doc-14, p. 9*}, one of the most hazardous chemicals in the Inventory is Hydrogen Fluoride. The SCAQMD has independently disclosed that the *Refinery Operator* on-site amount of Hydrogen Fluoride ranges in the hundreds of thousands of pounds.

Therefore, in addition to being a *EPA-Permit Record* defect, the *Refinery Operator* having an amount that is BLANK, as disclosed a 55-page 'Ultramar Chemical Inventory', also violates "Section K(25) {(Permit) Administration}" [*Draft-Title-V* {p. 1352 of 1381} & *EPA-Permit* {p. 1339 of 1369}]:

"All records, reports, and documents required to be submitted by a Title-V Operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000. [3004(a)(12)]"

These additional defects render the Valero-Ultramar information provided to the LAFD CUPA as the responsible CUPA as deficient and incomplete, to the point that the actual hazard and risks associated with *Refinery* operation cannot be determined the CUPA or any other Agency, based on the *Refinery* information provided to the CUPA, which constitutes a serious risk to the Public Health and Safety.

Claim_12b Relief sought: Citizen prays the above defect needs to be cured prior to the issuance of a *Final-Title-V*, by having the 'Ultramar Chemical Inventory' redone by the *Refinery Operator*, with all chemical quantities having standard weight or volume units, with numerical amounts included.

In addition, Citizen further prays, as part of the *EPA-Permit* changes and modifications to cure the above identified defects in the *EPA-Permit Process* and the *EPA-Permit Record*, that the above paragraph *E-19* be added to the *Final-Title-V*.

Claim_12c Details: As the above **Claim_12 Background** graphic *{Doc-14, p. 9}* shows, the 55-page 'Ultramar Chemical Inventory' presented by the *Refinery Operator* bears a time-stamp of 7/28/2011. Subtracting 5-years from the present-day *EPA-Permit* date of 5-28-2024 gives 5-28-2019, indicating that the **prior** Valero-Ultramar *Title-V EPA-Permit* also had this defect. Subtracting another 5-years from that date gives 5-28-2014, indicating that the **prior-prior** Valero-Ultramar *Title-V EPA-Permit* also had this defect. Subtracting another 5-years from that 2014 date gives 5-28-2009, making it likely that this 55-page 'Ultramar Chemical Inventory' presented by the *Refinery Operator* was developed in response to a concern that was raised in the **prior-prior-prior** Valero-Ultramar *Title-V EPA-Permit* of circa 5-28-2009. This is another serious violation of the "Section K(25) {(Permit) Administration}" [*Draft-Title-V* {p. 1352 of 1381} & *EPA-Permit* {p. 1339 of 1369}] requirements:

"All records, reports, and documents required to be submitted by a Title-V Operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000. [3004(a)(12)]"

as Citizen finds it inconceivable that the quantity for every listed chemical from more than 12 years ago remains valid today. This time-stamp defect renders the Valero-Ultramar information provided to the LAFD CUPA as the responsible CUPA as deficient, incomplete, and obsolete to the point that the actual hazard and risks associated with the present-day *Refinery* operation cannot be determined the CUPA or any other Agency, based on the *Refinery* information provided to the CUPA, which constitutes a serious risk to the Public Health and Safety.

Claim_12c Relief sought: Citizen prays the above defect needs to be cured prior to the issuance of a *Final-Title-V*, by having the 'Ultramar Chemical Inventory' redone by the *Refinery Operator*, with all chemical quantities having standard weight or volume units, with numerical amounts included, and including a new inventory time stamp. The SCAQMD should then be given the responsibility to actually spot-check the accuracy of this new inventory, including validating the chemical type, quantity unit, and quantity amount, with that spot-check specifically including Hydrogen Fluoride.

Citizen further prays, as part of the *EPA-Permit* changes and modifications to cure these identified defects in the *EPA-Permit Process* and *EPA-Permit Record*, that paragraph *E-19* be added to the *Final-Title-V*.

Claim 13: Only 7 of 286 'Chemical Description Pages' for OES 2731 given to the LAFD CUPA by the Refinery Operator

From the LAFD CUPA: 5 Pages Ultramar Chemical Storage Inventory, pp. 515-521 of 693

Los Angeles City Fire Department Certified Unified Program Agency CHEMICAL DESCRIPTION (OES 2731)

CD+

California Hazardous Materials Inventory Reporting Form - Chemical Description Page

DATE: #Name?

Page 1 of 288

ONLY 7 PAGFS OF 286 PAGFS OF OES-2731 RESPONSE INCLUDED

pp. 1-4, p. 176, p. 274-275

UNIFIED PROGRAM CONSOLIDATED FORM		HAZARDOUS MATERIALS	
HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION			
<input type="checkbox"/> ADD		<input type="checkbox"/> DELETE	
BUSINESS NAME (Name of FACILITY NAME or DBA - Doing Business As)			
CHEMICAL LOCATION			
FACILITY ID #			
CHEMICAL NAME			
COMMON NAME			
CAS #			
HAZARDOUS MATERIAL TYPE			
PHYSICAL STATE			
HAZARD CATEGORIES			
AVERAGE DAILY AMOUNT			
UNIT #			
STORAGE CONTAINER			
STORAGE PRESSURE			
STORAGE TEMPERATURE			
HAZARDOUS COMPONENT			
EHS			
CAS #			

Los Angeles City Fire Department Certified Unified Program Agency		CHEMICAL DESCRIPTION (OES 2731)	
California Hazardous Materials Inventory Reporting Form - Chemical Description Page			
HAZARD CATEGORIES			
HAZARDOUS MATERIAL TYPE			
PHYSICAL STATE			
HAZARD CATEGORIES			
AVERAGE DAILY AMOUNT			
UNIT #			
STORAGE CONTAINER			
STORAGE PRESSURE			
STORAGE TEMPERATURE			
HAZARDOUS COMPONENT			
EHS			
CAS #			

Los Angeles City Fire Department Certified Unified Program Agency		CHEMICAL DESCRIPTION (OES 2731)	
California Hazardous Materials Inventory Reporting Form - Chemical Description Page			
HAZARD CATEGORIES			
HAZARDOUS MATERIAL TYPE			
PHYSICAL STATE			
HAZARD CATEGORIES			
AVERAGE DAILY AMOUNT			
UNIT #			
STORAGE CONTAINER			
STORAGE PRESSURE			
STORAGE TEMPERATURE			
HAZARDOUS COMPONENT			
EHS			
CAS #			

Los Angeles City Fire Department Certified Unified Program Agency		CHEMICAL DESCRIPTION (OES 2731)	
California Hazardous Materials Inventory Reporting Form - Chemical Description Page			
HAZARD CATEGORIES			
HAZARDOUS MATERIAL TYPE			
PHYSICAL STATE			
HAZARD CATEGORIES			
AVERAGE DAILY AMOUNT			
UNIT #			
STORAGE CONTAINER			
STORAGE PRESSURE			
STORAGE TEMPERATURE			
HAZARDOUS COMPONENT			
EHS			
CAS #			

Claim_13 Background: The Valero-Ultramar information, given to the LAFD-CUPA overseeing the operation of the Valero Ultramar Wilmington HF Refinery, as disclosed in LAFD-2022 {Doc-14, Doc-03}, appears to be further incomplete, in that only 7 pages of an alleged 286 pages of “Chemical Description (OES 2731) Pages”, appear to have been delivered by the *Refinery Operator* to the LAFD-CUPA, as reproduced here {Doc3a, p. 10 of 10}:

Claim_13 Relief Sought: The entire 286 pages of OES-2731 materials should be delivered to the LAFD-CUPA with a copy to the SCAQMD, which should then be allowed to make it available for Public Comment and Review through the standard SCAQMD channels, processes, and procedures.

Claim_14: Virtually no in-use Refinery Chemicals have "0.00E+00" Cancer Risk

Claim_14 Background: In "Section J: Air Toxics, Hazardous Air Pollution from Petroleum Refineries", the Risk Tables for Cancer Risk contain multiple entries listed as "0.00E+00". For virtually all *Refinery* use chemicals, having a "0.00E+00" value as a table entry makes those tables *prima facie* incorrect and inaccurate, rendering both the *Draft-Title-V* and the *EPA-Permit* as incomplete or improper documents [Draft-Title-V {pp. 1275-1295 of 1381} & EPA-Permit {pp. 1265-1285 of 1369}]. Allowing these "0.00E+00" is a defect in the *EPA-Permit Process*, with those values in documents being a defect in the *EPA-Permit Record*.

Citizen claims that these Tables need to be modified so as to contain **NO** inaccurate "0.00E+00" risk values associated with any listed *Refinery* use chemical. Citizen further claims all inaccurate "0.00E+00" values also violate "Section K(25) {(Permit) Administration}" [Draft-Title-V {p. 1352 of 1381} & EPA-Permit {p. 1339 of 1369}]

"All records, reports, and documents required to be submitted by a Title-V Operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000. [3004(a)(12)]"

These multiple pages of defects even more so further renders the Valero-Ultramar information provided to the LAFD CUPA, as the responsible CUPA, as deficient and incomplete, to the point that the actual hazard and risks associated with *Refinery* operation cannot be determined by the CUPA or any other Agency, which constitutes yet another additional very serious risk to the Public Health and Safety.

Claim_14 Details: Citizen originally believed that Valero-Ultramar response to the SCAQMD regarding these entries, would have been the equivalent of "The Computer Did It", which is not a valid excuse for matters of the Public Health and Safety. However, Citizen was stunned by the SCAQMD defending these inaccurate “0.00E+00” values as follows {Doc-18, p. 5 of 19}:

	Comment	South Coast AQMD Staff Response
A-7	NOTE-B: Appendix A, Tables 11-12, "Maximum Exposed Residential [Table 11] / Worker [Table 12] Cancer Risk Summary After Implementation of Risk Reduction Measures" contains two categories of tabulated entries under the column heading "Sum of RISK_SUM". One category are non-zero numerical values which range from 4.52E-06 to 3.44E-12. The other is 0.00E+00. There is NO ZERO RISK chemical. These tables need to be re-done with Valero's numerical values publicly disclosed.	"SUM of RISK_SUM" column is meant to reflect cancer risk. These tables are reproduced from output using software developed by California Air Resources Board (CARB), named Hotspots Analysis and Reporting Program (HARP). Some toxic air contaminants do not have approved cancer risk assessment health values, including some shown in Tables 11 and 12 of the VRRP. Thus, the resulting output from HARP correctly displays cancer risk to be 00E+00 for those toxic air contaminants without approved cancer risk health values.

The SCAQMD claim that the “*HARP correctly displays cancer risk to be 00E+00 for those toxic air contaminants without approved cancer risk health values*” in itself is a serious defect in the *EPA-Permit Process*, because it is a *prima facie* inaccurate value for virtually all hazardous *Refinery* chemicals.

Citizen claims that it is the *Refinery Operator's* responsibility to provide 'cancer risk health values', or a range thereof, for the chemicals they choose to have on-site and expose their workers, contractors, and visitors to. Citizen claims it is the job of the SCAQMD to review what the *Refinery Operator* provides, and ensure that the information is in accordance with "Section K(25) {(Permit) Administration}”.

Citizen also claims “*HARP correctly displays cancer risk to be 00E+00*” would be a correct statement and correct process for the present-day “SUM of RISK_SUM” column **IF AND ONLY IF** the resulting cancer risk value is interpreted to be a **minimum** possible value for the cancer risk.

Citizen finds that this identified defect in both the *EPA-Permit Process* and *EPA-Permit Record* for this one item is likely an important contributor to why Environmental Justice Communities have significantly higher cancer rates than their surrounding communities. Citizen further claims being a **minimum** possible value does not relieve the *Refinery Operator* from the onus of developing a **maximum** possible value for each air toxic, even for those chemicals that does not have a specific approved cancer risk health value. The combination of both tables, one with the “SUM of RISK_SUM **minimum**” and one with the “SUM of RISK_SUM **maximum**” together would then be accurate and obey "Section K(25) {(Permit) Administration}”.

Claim_14 Relief Sought: The listed cancer risk for each chemical in the *EPA-Permit*, and the “RISK_SUM” and “SUM of RISK_SUM” and associated values derived from those individual listed cancer risk entries must all be clearly labeled as a **Cancer Risk minimum**.

In addition, Citizen prays that the *Refinery Operator* be mandated to develop best-estimates for the **Cancer Risk maximum** for each of the chemicals they choose to have on-site and expose their workers, contractors, and visitors to, which do not yet have an '*approved cancer risk health value*'. The *Refinery Operator* should then produce companion **Cancer Risk maximum** tables that parallel the present **Cancer Risk minimum** *EPA-Permit* tables, and submit an updated *Final-Title-V* to both the SCAQMD and US EPA for review and concurrence.

Citizen also prays that the *Refinery Operator* be given a specific period of performance to complete an *Updated-Final-Title-V*, such as 1-year from the initial *Final-Title-V* issuance, with a fee or fine schedule for every month delay in table completion and submission of an updated *Final-Title-V* to both the SCAQMD and US EPA for review and concurrence.

Claim_15: Update “Statement of Findings ... and Mitigation Monitoring Plan”

Claim_15 Background: Both the *Draft-Title-V* and the *EPA-Permit* contain this *Refinery Operator* requirement [*Draft-Title-V* {p. 162 of 1381} & *EPA-Permit* {p. 160 of 1369}]:

F8.1: The Operator shall comply with all applicable mitigation measures and/or project conditions stipulated in the 'Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan' document which is part of the SCAQMD Certified Subsequent Environmental Impact Report dated 8/30/2002 for this facility.

This document over 20 years old. Citizen further notes that this document predates the massive Los Angeles Refinery Explosion of 18 February 2015 at the other HF Refinery within the SCAQMD purview, with that accident highlighting the potential need for new *Findings*, additional *Overriding Considerations*, and enhanced *Mitigation Monitoring Plans* at every *Refinery* that uses HF alkylation.

Claim_15 Details: Citizen claims that both the SCAQMD and US EPA erred in not having any documented review over the last 20 years to examine or justify whether any updates were or were not needed to any of the original 8/30/2002 *Refinery Mitigation Measures* or *stipulated project conditions* for the *Refinery Operator*. As a result, Citizen claims that an update to that original document is needed to be mandated by the US EPA.

Claim_15 Relief Sought: Citizen prays that the US EPA Administrator mandate the following additions to the *Final-Title-V* to cure the above defect:

F8.2: During this Final-Title-V renewal period (2024-2029), the Refinery Operator shall work with the SCAQMD to develop an "Updated SCAQMD Certified Subsequent Environmental Impact Report (UC-EIR)" including:

F8.2(a) An updated assessment of the Public Health and Safety risks associated with continued use of HF/MHF Alkylation by the Refinery Operator.

F8.2(b) A specific evaluation of the Environmental Impacts of a 'Category 4' Catastrophic HF/MHF release, for HF/MHF release effects both within the Refinery, and 'Outside the Refinery'.

Claim_16: Yearly Updates to Risk Management Programs (RMP) Needed

Claim_16 Background: In "Section D: Facility Description and Equipment Specific Conditions" [*Draft-Title-V* {p. 163 of 1381} & *EPA-Permit* {p. 161 of 1369}], it is noted that: "*The Operator shall comply with the terms and conditions set forth below: Hydrogen Fluoride*", with sub-sections (a.) through (e.) listed afterwards.

In addition, the regarding *Refinery Voluntary Risk Reduction Plans (VRRP)*, the SCAQMD document:

<https://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-vrrp-guidelines-201809.pdf>

notes on p. 2 of 21, for Voluntary Risk Reduction Plans (VRRP), that:

"Only those risk reduction measures that are needed to reduce Refinery Facility Risks below the Voluntary Risk Threshold (VRT) need to be identified in the VRRP".

Claim_16 Details: Citizen claims that both the SCAQMD and US EPA erred in not establishing a *Refinery VRT and VRRP for Hydrogen Fluoride (HF) and Modified Hydrofluoric Acid (MHF)*, in order to be properly protective of the Public Health and Safety.

Citizen further claims that in order to be properly protective of the Public Health and Safety, that a yearly review, revision, and implementation of the Risk Management and Prevention Plan (RMPP) Reduction Program and the cognate California Accidental Release Prevention (CalARP) program are needed for continued *Refinery* use of Hydrogen Fluoride (HF) and Modified Hydrofluoric Acid (MHF), with those results made available to the Public through the SCAQMD.

Claim_16 Relief Sought: Citizen prays that the US EPA Administrator mandate and allow the following addition of sub-section (f) to the present-day "Section D: Facility Description and Equipment Specific Conditions" sub-sections (a)-(e) [*Draft-Title-V* {p. 162 of 1381} & *EPA-Permit* {p. 161 of 1369}], as follows:

(f). Conduct yearly review, revision, and implementation of the Risk Management and Prevention Plan (RMPP) Reduction Program and the cognate California Accidental Release Prevention (CalARP) program for Hydrogen Fluoride (HF) and Modified Hydrofluoric Acid (MHF), and make the results available for Public review and Public Comments through the SCAQMD.

(f)(1) As part of the RMPP, a specific Voluntary Risk Threshold (VRT) and a Voluntary Risk Reduction Plan (VRRP) for shall be developed by the Refinery Operator, with concurrence by the SCAQMD required, for both Hydrogen Fluoride (HF) and Modified Hydrofluoric Acid (MHF), within 6 months from the date of this Title-V permit first applicability.

(f)(2) Updated VRT and VRRP shall be required, as in (f) above, as long as the Refinery Operator engages in HF/MHF based alkylation.

Claim_17: Miscellaneous Claims

Claim_17a: HF/MHF Settler and Storage Tanks need to be put under similar requirements as tanks containing petroleum products.

The "Section J: Air Toxics, Hazardous Air Pollution from Petroleum Refineries", lists "Storage Tanks" containing petroleum products as being under "Control, Testing, Procedures, Monitoring, and Reporting Requirements". The Valero-Ultramar On-Site Storage Tanks for MHF need to be put under similar control, with a section added to the *Final-Title-V*, to accomplish that in a properly protective manner to the Public Health and Safety. This is especially important, because of the corrosive nature of hydrogen fluoride and MHF, and the need for special piping materials and special seal materials and flanges for pipe connections.

Claim_17b: HF/MHF Transfer Station needs to be put under similar requirements to the Refinery 'Gasoline Loading Dock'.

In "Section J: Air Toxics, Hazardous Air Pollution from Petroleum Refineries", it lists "Gasoline Loading Rack" as an Air Toxics source, with a page of Control, Testing, Procedures, Monitoring, and Reporting Requirements. The "MHF Transfer Station", which bring HF/MHF into the *Refinery Facility*. This "MHF Transfer Station" needs to be put under similar control, with a section added to this *Final-Title-V*, to accomplish that in a properly protective manner to the Public Health and Safety.

Claim_17c: Refinery Asphalt Plant needs to be put under the new SCAQMD Rule 1180.1

There is a Table in both the *Draft-Title-V* and the *EPA-Permit*, [*Draft-Title-V* {p. 1314 of 1381} & *EPA-Permit* {p. 1304 of 1381}], which lists 27 Units, of which 9 are marked with an asterisk and the note "Unit Not Included in Plan". Citizen claims that many of these units need to be "Included in Plan" before the *Final-Title-V* is issued. In addition, four of the 27 Units, {Devices #D179, #D13, #D63, #D64} all asterisked as "Unit Not Included in Plan", are located in the Valero-Ultramar "Asphalt Plant". Regarding those units, Citizen notes the following:

On 1/5/2024, the SCAQMD Governing Board amended Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities (Rule 1180), and adopted Rule 1180.1 -- Fenceline and Community Air Monitoring for Other Refineries.

The newly adopted Rule 1180.1 applies to "Asphalt Plants". The present Title-V Valero-Ultramar *Final-Title-V* needs to be revised to be fully compliant with this newly adopted Rule 1180.1. These revisions should include having Units from the "Asphalt Plant" be "Included in Plan".

Several items of this Table have "N/A" entries. "N/A" can mean "Not Applicable" or that the data is "Not Available". Which one it is be spelled out in the *Final-Title-V* on every page "N/A" used, with similar notation for all other occurrences. All "N/A" designations should be revisited, and reviewed to see if the newly adopted Rule 1180.1 creates a new "Now Applicable" condition.

Finally, in Section K {Title-V Administration}, Rule 1180, Rule 1181.1, and Rule 1410 also need to be added to those lists [*Draft-Title-V* {p. 1354 of 1381} & *EPA-Permit* {p. 1341 of 1369}].

Claim_17d: Updated Flare Minimization Plans (FMP) Needed

The *Draft-Title-V* pages detail Rule 1118 Flare Minimization Plans (FMP) with Calendar Year (CY) dates of: 2009, 2011, 2012, 2014, and 2016. The SCAQMD required revisions to the CY-2016 FMP, with the 8/21/2019 version approved by the SCAQMD 1/29/2020, so there never was more than a 2 year delay in Valero-Ultramar providing an updated FMP. It is now more than 4 years after 1/29/2020. so an updated 2024 FMP needs to be required of Valero-Ultramar, as part of the *Final-Title-V*.