Olga Pikelnaya

From: Mohamed Elgafi <melgafi@yahoo.com>
Sent: Friday, December 7, 2018 11:39 PM
To: Rule 1180
Subject: Re: SCAQMD Rule 1180 Refinery Fenceline Monitoring Plans are Available for Public Comment

Thanks,

All the plans seem adequate at the fence. Meanwhile, the height/elevation of the source is not clear. It has an impact. Example, stack emission lands about ten times the height of the stack, (from the stack, an old rule of thump).

Also, noticed the Torrance refinery are releasing 67,518 pounds per year HCN, and still talking about HF.
I wish zero discharge for both.

Regards,

Mohamed Elgafi

On Fri, 12/7/18, South Coast AQMD <rule1180@aqmd.gov> wrote:

Subject: SCAQMD Rule 1180 Refinery Fenceline Monitoring Plans are Available for Public Comment
To: "Melgafi@yahoo.Com Melgafi@yahoo.Com" <melgafi@yahoo.com>
Date: Friday, December 7, 2018, 5:55 PM

New Page 1

Olga Pikelnaya

From: Sherry Lear <slearattorney@gmail.com>
Sent: Tuesday, December 11, 2018 9:22 PM
To: Andrea Polidori; Olga Pikelnaya
Subject: Rule 1180 Refinery Fenceline Monitoring Plans

Hello, my name is Sherry Lear and along with Damien Luzzo, we are co-organizers of 350 South Bay Los Angeles which is a 350.org chapter with membership in the South Bay and Los Angeles Harbor area. As such, we are active in refinery emission matters which have real effects on a great many of our members and their communities.

It has been some time since SCAQMD introduced Rule 1180 and I recently received notification that the refinery fenceline monitoring plans are only now available for public review and comment.

Our organization is extremely dismayed to see that only 14 days have been been allowed for comments on each of the plans, with the deadlines coming either on the same day or rapid succession.

Even assuming a volunteer organization such as ours had expertise to digest this information, the time frame is totally unreasonable given the number of plans and the sheer volume of materials.

Not only should there be a longer period for review and comment, there should be a public workshop offered on at least one month's notice (with Spanish and Tagalog translation) to provide assistance to the vast majority of the public for whose benefit this monitoring is being implemented.

Our organization has reached out to other environmental and environmental justice organizations about this development and are advised that the SCAQMD had promised to hold a public workshop concerning the fenceline monitoring plans.

Given the limited resources and funds available to our groups (in contrast to the billions of dollars of assets for the fossil fuel industry) and the realities that our communities face in the L.A. Basin, which has some of the worst air quality in the United States, we deserve far more time and opportunity to review, digest and then be able to provide comment on these plans.

While as a resident of San Pedro and a business owner in Torrance, I was initially quite hopeful to see such a regulation implemented (which frankly is long overdue), this now seems like it is turning into yet another lost opportunity for real oversight and being handled in a manner to rubber stamp the industry's wishes.

350 South Bay Los Angeles respectfully requests that the SCAQMD schedule a public workshop sometime in January and extend public comment for another 30 days after that time.

Thank you

Sherry Lear
Co-organizer
350 South Bay Los Angeles

Office: (310) 303-7950
Fax: (310) 316-0324

Olga Pikelnaya

From: Florence Gharibian <florencegharibian@yahoo.com>
Sent: Monday, December 17, 2018 11:39 AM
To: Olga Pikelnaya; Angela Johnson Meszaros; Joseph Lyou (GBM); Judy Mitchell; bo.parker@gmail.com; Philip Fine; Al Sattler; Cynthia Babich
Subject: Fence Line Monitoring Plans

Providing a pubic comment period on refinery fence line monitoring plans that runs from December 7, 2018 - December 21, 2018 reflects a continuing motive of reducing the ability of the public to comment and the preference for catering to the refineries.

Please extend the public comment period.

Olga Pikelnaya

From: Jesse Marquez <jnm4ej@yahoo.com>
Sent: Monday, December 17, 2018 4:29 PM
To: Andrea Polidori; Olga Pikelnaya
Cc: Jesse Marquez
Subject: Request for Public Comment Period Extension - Draft Refinery Fenceline Air Monitoring Plans
Attachments: CFASE Request for Public Comment Extension - Draft Refinery Fenceline Air Monitoring Plan - 12-17-2018.docx

Coalition For A Safe Environment

California Kids IAQ

Community Dreams

Apostolic Faith Center

EMERGE

American Legion Post 6

Wilmington Improvement Network

San Pedro & Peninsula Homeowners Coalition

NAACP- San Pedro-Wilmington Branch # 1069

California Communities Against Toxics

California Safe Schools

Del Amo Action Committee

Action Now

St. Philomena Social Justice Ministry

December 17, 2018

Dr. Andrea Polidori
Advanced Monitoring Technologies Manager
(909) 396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya

Program Supervisor

(909) 396 3157

opikelnaya@aqmd.gov

Re: Draft Refinery Fenceline Air Monitoring Plans

Su: Request for Public Comment Period Extension

Dear AQMD:

On behalf of the undersigned organizations we would like to request an extension until January 31, 2019 to submit our public comments on four Oil Refinery Draft Refinery Fenceline Air Monitoring Plans.

It is unrealistic for a governmental regulatory agency to allow two weeks for the public to prepare public comments on four different Oil Refinery Draft Refinery Fenceline Air Monitoring Plans.

We need sufficient time to read, evaluate, compare information, research information and prepare written comments.

This is also the Christmas Holiday time when people are shopping, traveling and even leaving the country.

Please send all correspondence or questions to me regarding this request.

Respectfully Submitted,

Jesse N. Marquez

Executive Director

Coalition For A Safe Environment

1601 N. Wilmington Blvd., Ste. B

Wilmington, CA 90744

310-590-0177

Ricardo Pulido

Executive Director

Community Dreams

1601 N. Wilmington Blvd., Ste. B2

Wilmington, CA 90744

mr.rpulido@gmail.com

310-567-0748

Pastor Alfred Carrillo

Apostolic Faith Center

1510 E. Robidoux St.

Wilmington, CA 90744

alfredcarrillo@msn.com

310-940-6281

Magali Sanchez-Hall, MPH
Quezada

Executive Director

EMERGE

913 East O Street

Wilmington, CA 90744

Chaplain Anthony

American Legion Post 6

1927 E. Plymouth St.

Long Beach, CA 90810

m.in.usa.aq@gmail.com

mssanchezhall7@gmail.com

646-436-0306

310-466-2724

Anabell Romero Chavez

Wilmington Improvement Network Coalition

Board Member

1239 Ronan Ave.

Wilmington, CA 90744

anab3ll310@yahoo.com

310-940-4515

Dr. John G. Miller, MD

San Pedro & Peninsula Homeowners

President

1479 Paseo Del Mar

San Pedro, CA 90731

igornla@cox.net

310-548-4420

Joe R. Gatlin

Vice President

NAACP

San Pedro-Wilmington Branch # 1069

225 S. Cabrillo Ave.

San Pedro, CA 90731

joergatlin45k@gmail.com

310-766-5399

Modesta Pulido

Chairperson

St. Philomena Social Justice Ministry

22106 Gulf Ave.

Carson, CA 90745

vdepulido@gmail.com

310-513-1178

Robina Suwol
Executive Director
California Safe Schools
P.O. Box 2756
Toluca Lake, CA 91610
robinasuwol@earthlink.net
818-261-7965

Jane Williams
Executive Director
California Communities Against Toxics
P.O. Box 845
Rosamond, CA 93560
dcapjane@aol.com
661-256-2101

Cynthia Babich
Executive Director
Del Amo Action Committee
4542 Irone Ave.
Rosamond, CA 93560
delamoactioncommittee@gmail.com
310-769-4813

Mitzi Shpak
Executive Director
Action Now
2062 Lewis Ave.
Altadena, CA 91001
msmshpak@gmail.com
626-825-9795

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December 17, 2018

Dr. Andrea Polidori
Advanced Monitoring Technologies Manager
(909) 396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya
Program Supervisor
(909) 396 3157
opikelnaya@aqmd.gov

Re: Draft Refinery Fenceline Air Monitoring Plans
Su: Request for Public Comment Period Extension

Dear AQMD:

On behalf of the undersigned organizations we would like to request an extension until January 31, 2019 to submit our public comments on four Oil Refinery Draft Refinery Fenceline Air Monitoring Plans.

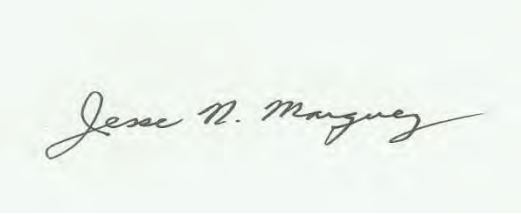
It is unrealistic for a governmental regulatory agency to allow two weeks for the public to prepare public comments on four different Oil Refinery Draft Refinery Fenceline Air Monitoring Plans.

We need sufficient time to read, evaluate, compare information, research information and prepare written comments.

This is also the Christmas Holiday time when people are shopping, traveling and even leaving the country.

Please send all correspondence or questions to me regarding this request.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744
310-590-0177

Ricardo Pulido
Executive Director
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Wilmington, CA 90744
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alfredcarrillo@msn.com
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Executive Director
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2062 Lewis Ave.
Altadena, CA 91001
msmshpak@gmail.com
626-825-9795

Olga Pikelnaya

From: Denise Bothe <Dbothe@carson.ca.us>
Sent: Wednesday, December 19, 2018 9:46 AM
To: Rule 1180
Cc: Saied Naaseh; Maria Gonzalez; Denise Bothe
Subject: Phillips 66
Attachments: Scanned from a Xerox Multifunction Printer.pdf

Please see attached document addressed to Dr. Andrea Polidori regarding SCAQMD Rule 1180, City of Carson.

City of Carson

December 18, 2018

To: Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
Rule1180@aqmd.gov

Re: SCAQMD Rule 1180 Comments on Phillips 66 – Carson Refinery Fence line Monitoring Plan Carson

Dear Dr. Polidori,

Thank-you for the opportunity to provide written comments on the SCAQMD Rule 1180 Fence line Monitoring Plan for the Phillips 66 – Carson Refinery. We appreciate the adoption of Rule 1180 and look forward to the increased scrutiny of the large sources of pollutants in our neighborhoods within the City of Carson.

We have reviewed the Monitoring Plan and have the following comments detailed below.

The large ***historical complaint database*** maintained by the SCAQMD regarding odors and complaints should be utilized to characterize the ongoing and historical emissions estimates from the refinery. By only focusing on the "routine" emissions associated with annual emissions reports and not the emissions that have historically occurred over the years due to "upset" situations, the placement of monitors may be compromised. For example, odors related to H2S "upset" emissions may not be captured by the point monitoring being conducted for H2S due to the monitors not being placed in sufficient numbers to cover the area of interest.

Odors can be a substantial issue for members of the community. While some levels of pollutants that can produce odors may be below the applicable reference exposure levels (RELs), there is still a substantial concern with odors. For example, the report indicates that H2S will be monitored in the 0-10 ppm range, whereas odors are detectable by the general population down to the low ppb range. The effect of the pollutant and their concentration on "nuisance" issues should be addressed in the analysis by utilizing conservative odor thresholds and historical odor complaints and not just the RELs.

We encourage Phillips to utilize the mobile monitor to monitor pollutant concentrations in the community when not being used for fence line monitoring. The use of a mobile monitor would be beneficial to the public to help with the understanding of the contribution of the refinery to the public health issues occurring in relation to odor events or long-term cancer and acute impacts. The use of the mobile monitor would also help cover gaps in the monitoring system.

The amount of potential downtime of the open-path systems regarding the interference of weather is a concern. The use of the FTIR and Open-path UV are excellent technologies when there is not rain or fog conditions. Rain and fog occur in Los Angeles about 30-40 days per year. This would constitute about a 10% downtime for the open-path systems, which are the only monitors for all pollutants except H2S and BC. We encourage the use of some point source monitors for other pollutants in order to cover the periods when the open path is not effective and to include these in the figures and analysis to ensure the appropriate location of these monitors. The City notes that Benzene has the potential to be used as a surrogate in line with the EPA Rule in addition to H2S as an odor surrogate.

Table 2.1 lists ***ethyl benzene*** as not presenting a specific health risk, whereas the CARB Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values table indicates that ethyl benzene presents a chronic and cancer risk with associated REL and cancer unit risk levels. Ethyl benzene is included in the ARB Hotspots Analysis and Reporting Program (HARP) model.

The ***location of the BC-H2S monitors*** shown in Figure 3.1 does not sufficiently cover the area to the west of the refinery as per the dispersion maps which show elevated concentration plumes to the west. The City notes that the residences within the City of Carson that are located in the closest proximity (1,600 feet) to the refinery are to the west of refinery. Therefore, the addition of H2S monitors along the west side of the refinery should be included in the plan and analysis. In addition, while we understand the level of effort needed to install open-path systems, leaving approximately 600-700 feet of the refinery fence line not covered by the open-path system on the west side of the refinery does not satisfy the stated goal of Rule 1180 of requiring real-time fence line air monitoring systems and that those systems cover all nearby downwind communities. The arrangement of the proposed systems should be revised to ensure complete coverage of the west side of the refinery.

The report does not discuss nearby schools, parks or other highly-sensitive areas. There are ***multiple schools*** located in Carson which should be addressed in the plan, including: Del Amo School, Carnegie Middle School, Bonita Street School, Dolores Street School, Carson High School, Catskill Avenue School, 232nd Place School, Caroldale Learning Community, White Middle School, Carson Street School, Rancho Dominguez Prep School, and Dominguez Elementary School. Nearby parks include Calas Park and Scott Park, these schools and parks should be added to the analysis.

Although the plan discusses nearby sensitive areas, it does not quantify the distances to the closest sensitive receptors. This information should be added in order to allow the public to understand the magnitude of the potential impact on their homes, businesses and schools.

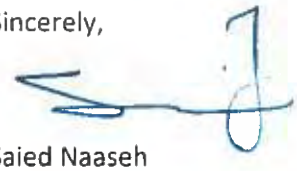
Information provided to the public through the data management system should include information related to RELs or other equivalent measures to help the public understand the potential effects of exposure to the pollutants. Information about concentrations in the absence of regulatory, public health standards and nuisance issues is not an effective tool for communicating potential impacts to the public. Notifications in the system allow for alerts if pollutant concentrations exceed given threshold

values, but the threshold values should also be included and clearly defined with references to the public. The plan should include odor thresholds as in many cases these pollutant levels are well below the notification thresholds but have significant potential to cause nuisance issues.

We appreciate the efforts made on the part of the SCAQMD to include the public in the review and comments of this important program. We also encourage the SCAQMD to continue this effort with the selection of the community monitors.

Thank you

Sincerely,



Saied Naaseh
Community Development Director

Olga Pikelnaya

From: Denise Bothe <Dbothe@carson.ca.us>
Sent: Wednesday, December 19, 2018 9:47 AM
To: Rule 1180
Cc: Saied Naaseh; Maria Gonzalez; Denise Bothe
Subject: Tesoro/Andeavor Rule 1180
Attachments: Scanned from a Xerox Multifunction Printer.pdf

Please see attached document addressed to Dr. Andrea Polidori regarding SCAQMD Rule 1180, City of Carson.

City of Carson

December 18, 2018

To: Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
Rule1180@aqmd.gov

Re: SCAQMD Rule 1180 Comments on Tesoro/Andeavor Fence Line Monitoring Plan Carson

Dear Dr. Polidori,

Thank-you for the opportunity to provide written comments on the SCAQMD Rule 1180 Fence Line Monitoring Plan for the Tesoro Los Angeles Refining & Marketing Company LLC Los Angeles Refinery. We appreciate the adoption of Rule 1180 and look forward to the increased scrutiny of the large sources of pollutants in our neighborhoods within the City of Carson.

We have reviewed the Monitoring Plan and have the following comments detailed below.

Figure 1 in the report is difficult to understand and needs a legend at a minimum. For example, what are the yellow and blue dots and the green squares? These are identified on a subsequent figure in the report, but the first figure should be annotated. Also, the wind rose should be more clearly laid out in a separate figure. The wind rose charts are too small to be legible and should be laid out in separate figures.

The Carson Crude Terminal was not included in the analysis. A crude terminal is an integral part of a Refinery operations and should be included in the monitoring effort. The Los Angeles Refinery Proposed Integration and Compliance Project EIR included the crude oil terminal and the Health Risk Assessment conducted for the EIR identified the area near the crude oil terminal, where residences are in the closest proximity to the refinery, as the area generating one of the highest residential cancer risk areas.

There are ***multiple schools*** located in Carson which are not included or addressed in the plan, including: Carnegie Middle School, Bonita Street School, Dolores Street School, Carson High School, Catskill Avenue School, 232nd Place School, Caroldale Learning Community, White Middle School, Carson Street School,

Rancho Dominguez Prep School and Dominguez Elementary School. These schools should be added to the analysis.

The large ***historical complaint database*** maintained by the SCAQMD regarding odors and complaints should be utilized to characterize the ongoing and historical emissions estimates from the refinery. By only focusing on the "routine" emissions associated with annual emissions reports and not the emissions that have historically occurred over the years due to "upset" situations, the placement of monitors may be compromised. For example, odors related to H2S "upset" emissions may not be captured by the point monitoring being conducted for H2S due to the monitors not being placed in sufficient numbers to cover a wider area. None of the segments along the west side of the refinery have any H2S monitoring yet these segments are located closest to residences and, according to the contour maps located in Appendix B, are the source of most of the H2S emissions. Historical odor complaints should be examined for spatial distribution of odor complaints and additional H2S monitors positioned accordingly.

Odors can be a substantial issue for members of the community. While some levels of pollutants that can produce odors may be below the applicable reference exposure levels (RELs), there is still a substantial concern with odors. For example, the average modeled hourly H2S concentration is 2-3 ppb, which is close to the level at which a fraction of the community would experience odor issues, yet still below the REL. The effect of the pollutant and their concentration on "nuisance" issues should also be addressed in the analysis by utilizing conservative odor thresholds and historical odor complaints and not just the RELs.

Information provided to the public through the data management system should include information related to RELs or other equivalent measures to help the public understand the potential effects of exposure to the pollutants. Information about concentrations in the absence of regulatory, public health standards and nuisance issues is not an effective tool for communicating potential impacts to the public. Notifications in the system allow for alerts if pollutant concentrations exceed given threshold values, but the threshold values should be clearly communicated and defined to the public. Table 15 in the monitoring plan should include references for the values listed.

We appreciate the efforts made on the part of the SCAQMD to include the public in the review and comments of this important program. We also encourage the SCAQMD to continue this effort with the selection of the community monitors.

Thank you

Sincerely,

Saied Naaseh
Community Development Director

Olga Pikelnaya

From: Alex Cornejo <acornejo@sbaycenter.com>
Sent: Thursday, December 20, 2018 2:33 PM
To: Rule 1180
Subject: Fenceline Air Monitoring Plan

Hello,

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live in Long Beach nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Alex Cornejo
SPA 8 Community Organizer
Office 310.414.2090 |Cell 562.607.5626
540 N. Marine Ave. | Wilmington, CA 90744
sbccThriveLA.org

Olga Pikelnaya

From: Lourdes Garcia <mlgarcia@sbaycenter.com>
Sent: Thursday, December 20, 2018 2:53 PM
To: Rule 1180
Subject: Rule 1180 - Tesoroâ€™s Fenceline Monitoring Plan

To whom this may concern,

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,
Lourdes Garcia
Program Supervisor (Spa 2 & 6) Community Organizing
310.414.2090 | 562.606.9006
540 N. Marine Ave. | Wilmington, CA 90744
sbccThriveLA.org

Olga Pikelnaya

From: Elisea Grimaldo <egrimaldo@sbaycenter.com>
Sent: Thursday, December 20, 2018 2:54 PM
To: Rule 1180
Subject: Rule 1180-Tesoro's proposed Fenceline Air Monitoring Plan

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Elisea Grimaldo

Elisea Grimaldo
Program Supervisor -SPA 8, Community Organizing
Office 310.414.2090 |Cell 562.833.4991
SBCC, Thrive LA
540 N. Marine Ave. | Wilmington, CA 90744
sbccThriveLA.org

Olga Pikelnaya

From: Lourdes Garcia <lg68906@gmail.com>
Sent: Thursday, December 20, 2018 2:59 PM
To: Rule 1180
Subject: Rule 1180 - Tesoroâ€™s Fenceline Monitoring Plan

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,
Maria L.Garcia

Olga Pikelnaya

From: Juan Torres <juantorres@gangfree.org>
Sent: Friday, December 21, 2018 2:25 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

AQMD,

I am emailing to encourage SCAQMD to move forward with Tesoro's proposed Fenceline Air Monitoring Plan. I currently work close to the Wilmington refinery and am interested in seeing the next phase implemented. If you have any questions, please feel free to contact me. Thank You!

Sincerely,

Juan C. Torres, MPA
Gang Alternatives Program (GAP)
www.gangfree.org
Office Phone :(310) 519-7233
Email: juantorres@gangfree.org

Olga Pikelnaya

From: Rubi Lara <lrubi40@yahoo.com>
Sent: Friday, December 21, 2018 2:59 PM
To: Rule 1180
Subject: Air Monitoring Plan

Hello,

I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Rubi Lara

Olga Pikelnaya

From: Anabel Barajas <banabel84@yahoo.com>
Sent: Friday, December 21, 2018 3:03 PM
To: Rule 1180
Subject: Air Monitoring Plan

Hi,

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Anabel Barajas

Olga Pikelnaya

From: Veronica Perez <vperez131@yahoo.com>
Sent: Friday, December 21, 2018 3:08 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

Hi,

I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Veronica Perez

Olga Pikelnaya

From: Olga Hernandez <olga.h100@yahoo.com>
Sent: Friday, December 21, 2018 3:12 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

To Whom it may concern,

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Olga Hernandez

Olga Pikelnaya

From: Esther Hernandez <hesther23@yahoo.com>
Sent: Friday, December 21, 2018 3:16 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Esther

Olga Pikelnaya

From: Alicia Castro <aliciacastromu@yahoo.com>
Sent: Friday, December 21, 2018 3:25 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Alicia Castro

Olga Pikelnaya

From: Ana Aguilar Ana <awesome.anaaguilar@yandex.com>
Sent: Friday, December 21, 2018 3:32 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

To whom it may concern,

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Ana

Olga Pikelnaya

From: Alma Claro <almaclaromu@yahoo.com>
Sent: Friday, December 21, 2018 3:30 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Alma Claro

Olga Pikelnaya

From: Cecilia Espinoza <celiaespinozamu@yahoo.com>
Sent: Friday, December 21, 2018 3:38 PM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

By means of this email, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. If you have any questions do not hesitate to contact me.

Respectfully,

Cecilia Espinoza

Olga Pikelnaya

From: partwolff@yahoo.com
Sent: Friday, December 21, 2018 4:48 PM
To: Rule 1180
Subject: HF/MHF

HF/ MHF should be included in Rule 1180's Fenceline monitoring plan put out by The Torrance Refinery and the Valero Wilmington Refinery

--
"EquineRevelation" -- Google that!

Olga Pikelnaya

From: silicis <silicis@gmail.com>
Sent: Friday, December 21, 2018 5:50 PM
To: Rule 1180
Subject: Ban MHF

HF/ MHF should be included in Rule 1180's Fenceline monitoring plan put out by The Torrance Refinery and the Valero Wilmington Refinery

Olga Pikelnaya

From: ajar.lax@verizon.net
Sent: Friday, December 21, 2018 6:45 PM
To: Rule 1180
Cc: info@traasouthbay.com; Sallyhyati@gmail.com
Subject: Torrance refinery.

I strongly urge and demand MHF/HF must be included in the Torrance refinery fence line monitoring system at this time, until MHF is permanently banned from our community in the very near future. There are lives at stake here and the community must be protected against the possibility of a catastrophic disaster in case of an earthquake or another fatal miscue by the greedy, unresponsive refinery owners.

Adrian Rops.

Olga Pikelnaya

From: Stacy A <spatkinson4@gmail.com>
Sent: Friday, December 21, 2018 8:15 PM
To: Rule 1180
Subject: MHF

To whom it may concern,
MHF monitoring should be included in this rule. It is negligent to not monitor this toxic chemical. For the safety of our community, we depend on your support.

Stacy Atkinson

Sent from my iPhone

Olga Pikelnaya

From: Jane Affonso <jgaffonso@gmail.com>
Sent: Friday, December 21, 2018 11:44 PM
To: Rule 1180
Subject: Rule 1180- Monitoring of MHF

I urge the SCAQMD to include modified hydrofuoric acid (MHF) and HF in the Air Monitoring Plan of Rule 1180. MHF can cause a disaster of immense proportions and the community needs to know immediately when there is a leak. As long as a refinery is using MHF or HF, it must be monitored by the SCAQMD and included in Rule 1180.

The fact the the Torrance Refinery does not think that MHF should be included in the plan concerns me. Why would they fear monitoring unless there are leaks of this incredibly dangerous substance?

Thank you in advance for standing up to the two refineries in our area that are holding the community hostage rather than switching to a safer alternative.

Sincerely,

Jane Affonso

Olga Pikelnaya

From: Gaby Segovia <gabysegovia156@yahoo.com>
Sent: Saturday, December 22, 2018 10:46 AM
To: Rule 1180
Subject: monitoring plan

By means of this email, i would like to encourage the scaqmd to approve Tesoros proposed fenceline air monitoring plan. I live nearby the tesoro Carson and WILMINGTON refineryand would like to see the next phasesof the rule 1180

Respectfully
Gabby Segovia

Enviado desde Yahoo Mail para Android

Olga Pikelnaya

From: Vilma Grijalva <vilmagrijalva24@gmail.com>
Sent: Saturday, December 22, 2018 10:49 AM
To: Rule 1180
Subject: Rule 1180 Tesoro Fenceline Monitoring Plan

Hello,

By means of this email I would like To encourage the SCAQMD To approve Tesoros proposed Fenceline Air Monitoring Plan.

Respectfully

Vilma

Olga Pikelnaya

From: Tayde Sanchez <taydesanchez48@gmail.com>
Sent: Saturday, December 22, 2018 10:52 AM
To: Rule 1180
Subject: Monitoring plan

Hello

By means of this email I would like to encourage the scaqmd to approve Tesoro's proposed fence line air monitoring plan. I live nearby Tesoro Carson and Wilmington refinery and would like to see the next phases of the rule 1180 implemented

Respectfully

Tayde Hernandez

Enviado desde mi iPhone

Olga Pikelnaya

From: dorothy Moore <swimawayswimaway@gmail.com>
Sent: Saturday, December 22, 2018 5:29 PM
To: Rule 1180
Subject: MHF/HF including in monitoring

I'm sure you're already aware of the MHF leak today Sat Dec 22 while offloading from a truck. It was "controlled within the hr" but 2 hrs 40 min to "stop and contain" it at 11am (8:20 call to fire dept)… according to the Press Telegram. Esttim 5 gal.

Could we please monitor for MHF and HF and consider adding sensors at ground level at entrances too as it may not rise to the level of the fence monitors. Thanks, Dorothy Moore

Olga Pikelnaya

From: Ed and Joan <edandjoan@roadrunner.com>
Sent: Saturday, December 22, 2018 7:00 PM
To: Rule 1180
Subject: Fence Line Monitoring of Air Quality

It is my understanding that the Torrance Refinery proposes to exempt itself from the Rule 1180 requirement for real time fence line monitoring of its highly dangerous hydrofluric acid, using instead its already existing monitoring system. All three beach cities (Redondo, Manhattan, and Hermosa) have protested the used of modified hydrofluric acid by the refinery, and the very least we deserve is fence line monitoring so the surrounding communities will have a reliable warning of any off-site release. I urge you to deny them the exemption they desire.

Joan Engelhaupt, Manhattan Beach Resident

Olga Pikelnaya

From: Portia La Ferla <wiseportia@gmail.com>
Sent: Saturday, December 22, 2018 8:33 PM
To: Rule 1180
Subject: Fenceline Monitoring of MHF/HF Urgently Needed

As a South Bay resident and worker whose workplace requires me to drive past the Torrance Refinery frequently, MHF/ HF must be included in the refinery fenceline monitoring system. I and all residents need to be informed regarding toxic releases by the refinery. The release of MHF/HF is a threat to the lives of many beyond our community and we must hold the refinery accountable for all toxic releases.

Sincerely,
Portia La Ferla

--

Olga Pikelnaya

From: Nancy <meworkhard@yahoo.com>
Sent: Sunday, December 23, 2018 4:24 PM
To: Rule 1180
Subject: Fenceline monitoring for HF

During an unplanned release, the potential failure of mitigation, failure of sensors and/or poor maintenance of mitigation equipment, fence-line monitoring should be mandatory for such a highly toxic chemical, as is HF/MHF; it **needs to be a part of the Air Monitoring Plan for Rule 1180**. There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on the chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery *it must be included in the fence-line monitoring plan.*
Thank you

Nancy Griffith

Olga Pikelnaya

From: Roger Peterson <rolipeters@mac.com>
Sent: Sunday, December 23, 2018 6:21 PM
To: Rule 1180
Subject: Air Monitoring Plan for Rule 1180

Dear AQMD;

I am writing to urgently request that HF/MHF needs to be part of the Air Monitoring Plan for Rule 1180 at the Torrance and Valero Refineries in California. If AQMD does not abolish the use of HF/MHF at these 2 refineries, there needs to be multiple systems in place to monitor any problem with this highly toxic chemical as there again was a leak at the Torrance facility yesterday.

Please take action on this important matter that impacts these densely populated communities. Please make sure that MF/MHF is included in Rule 1180 at the Torrance refinery.

Sincerely,

Lisa R Peterson

Olga Pikelnaya

From: Tonyvick <tonyvick@aol.com>
Sent: Monday, December 24, 2018 5:33 PM
To: Rule 1180
Subject: Rule 1180 at the Torrance Refinery

As a South Bay resident I am alarmed to learn that on page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/ HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Thank you.

Anthony Vickers

Olga Pikelnaya

From: John King <JKing@paramountcity.com>
Sent: Thursday, December 27, 2018 3:13 PM
To: Andrea Polidori; Olga Pikelnaya
Cc: John Carver
Subject: AQMD Rule 1180, Paramount Petroleum/World Energy

Drs. Polidori and Pikelnaya,

Thank you for giving the City of Paramount and the public the opportunity to comment on draft refinery fenceline air monitoring plans. Before submitting formal comments, could you let us know whether the former AltAir/Delek U.S. Holdings, Inc. refinery facility (now under World Energy ownership and operating as a 100% renewable production facility) in Paramount is now exempt from AQMD Rule 1180, including the requirement for a fenceline air monitoring plan?

Thanks,

John King
Planning Manager
City of Paramount
562-220-2049

Olga Pikelnaya

From: Mohamed Elgafi <melgafi@yahoo.com>
Sent: Friday, December 28, 2018 2:10 PM
To: Rule 1180; Andrea Polidori; Olga Pikelnaya
Subject: Mongering Location

Hi,

I believe I resounded on 12/7/2018. Happy New Year !

Regards,

Mohamed Elgafi

Olga Pikelnaya

From: bobmarypope@sti.net
Sent: Wednesday, January 2, 2019 3:30 PM
To: Rule 1180
Subject: Rule 1180 - Include MHF in Fence Monitoring at Torrance Refinery

To Whom It May Concern:

I am resident of Torrance and I have been following Rule 1410 since moving here in 2016. I strongly urge the dangerous chemical, MHF, be replaced with a safer chemical and absolutely be monitored by any fence monitoring system at the Torrance Refinery. The Daily Breeze published an article on December 23, 2018, about 5 gallons of MHF that leaked requiring firefighters and hazmat crews to control the situation. Yes, leaks happen and should be monitored by systems other than the refinery's own self regulation. The article ended with the statement " It wasn't immediately known if the spill affected air quality, though the SCAQMD in a statement said it hadn't received any air quality complaints. " This is not a scientific way to determine air quality.

Thank you, Mary Pope

Sent from my iPad

Olga Pikelnaya

From: Charlotte Oduro <cvoduro@gmail.com>
Sent: Thursday, January 3, 2019 9:29 AM
To: Rule 1180
Subject: Rule 1180 at Torrance Refinery

As a South Bay resident I am alarmed to learn that on page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/ HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Thank you.
Charlotte Oduro

Sent from my iPhone

Olga Pikelnaya

From: Mara Kapano <mkapano@gmail.com>
Sent: Thursday, January 3, 2019 1:11 PM
To: Rule 1180
Subject: Please Include MHF/ HF!!

Hello!

I am a concerned citizen living in Redondo Beach. It is imperative that MHF/ HF be included in the fence line monitoring rule. This is a vital key piece of information we need to build better protections for the community from this deadly, disastrous chemical.

Please do not allow the refinery to edit and continue to create their own false commentary about the fail safe internal monitoring they have for this chemical.

An MHF/ HF leak that reaches the fence line monitors will have offsite impact implications, and the community deserves to know.

Thank you for your consideration!

Mara Kapano

Olga Pikelnaya

From: Sandra Viera <sviera@sbcglobal.net>
Sent: Friday, January 4, 2019 3:27 PM
To: Rule 1180
Subject: Rule 1180

Dear AQMD Board Members and Staff,

Thank you for adopting Rule 1180. As a Torrance resident who gets alerts after flarings, explosions, leaks and other "mishaps" at the refinery from the Torrance Fire Department saying that there have been no offsite impacts IMMEDIATELY after the incident, I ask that the AQMD or another independent organization (or government agency located OUTSIDE of Torrance) be responsible for the fence line monitoring readings. Because the Torrance Fire Department has to work so closely with the refinery for safety reasons, they are "buddies" and will put out Torrance Refinery's (TORC) line. The community never hears about anything posing a danger to us even after the fact, from either TORC or the Fire Department.

MHF should also be a component of the fenceline monitoring system. Why would it not be? MHF poses the most danger to the community and we need to be informed.

The community trusts the AQMD to keep the people, and not TORC's interests, in mind. It has been a long and arduous process by the community to even get AQMD to make a rule on fence line monitoring or banning MHF. Please do not let the "fox guard the henhouse." We **need** you. Thank you.

Sandra Viera

Olga Pikelnaya

From: Lozo, Carolyn@ARB <Carolyn.Lozo@arb.ca.gov>
Sent: Monday, January 7, 2019 4:35 PM
To: Olga Pikelnaya; Andrea Polidori
Cc: Mitchell, Alexander (Lex)@ARB
Subject: CARB comments on SCAQMD Rule 1180 Fenceline Monitoring Plans
Attachments: SCAQMD_Rule_1180_Fenceline_Monitoring_Plan_Comments.pdf

Andrea and Olga,

Please accept CARB's comments (attached) on the refinery fenceline monitoring plans prepared pursuant to SCAQMD Rule 1180. If you have any questions about our comments, please let me know.

Carolyn Lozo
Manager, Program Assessment Section
Oil and Gas and GHG Mitigation Branch
Industrial Strategies Division
916.445.1104
clozo@arb.ca.gov

CARB comments on SCAQMD Rule 1180 Fenceline Monitoring Plans
January 7, 2019

Chevron El Segundo Refinery:

- Pages 23-26:
  - CARB suggests there be a monitoring path located in the NE corner of the property (i.e., between Paths 5 and 6) considering the predominant wind direction is from the SW, with schools and day care facilities downwind of the facility.
  - As indicated in Figure 4, Chevron has not included Chevron Park at the northeast corner of the refinery as a recreation area in its identification of sensitive receptors. Although Chevron Park does not appear to be a publicly accessible park, this park is accessible to Chevron employees who work at the refinery as well as their families, including children. CARB recommends that South Coast Air Quality Management District (AQMD) consider whether to include this as a sensitive receptor for purposes of evaluating the need for open-path monitoring between Paths 5 and 6.
  - Based on Figures 10, 12, and 14, it does appear emissions are of concern on the western edge of the refinery, particularly when winds are offshore. Considering El Segundo Beach is next to the western edge of the Chevron facility, sensitive groups could be exposed to benzene, naphthalene, and ammonia. Therefore, a monitoring path should be added to the W-NW fenceline. Even if the refinery is at a higher altitude than the beach, subsidence during high pressure regimes and mixing in the boundary layer could bring hazardous pollutants to sea level.
  - The annual-average dispersion modeling results for benzene (Figure 10) and 1,3-butadiene (Figure 11) show elevated levels of these pollutants at the fenceline in the gap between Paths 1 and 2. There are two additional sensitive receptors (i.e., Candy Cane Park and El Segundo Pre-School) within a quarter mile of the fenceline to the north of this gap. Based on the modeling results and the proximity to sensitive receptors, CARB recommends that Chevron extend the existing paths and/or add additional path(s) to cover the gap between Paths 1 and 2.
  - The selection of open-path monitoring locations is based on annual average dispersion modeling, and did not consider short-term (i.e., hourly average) modeling results. This is inconsistent with the planned notification system for the fenceline monitoring, which will be based on short-term (i.e., rolling hourly average) monitoring data (see page 59). Because acute health impacts may not be associated with predominant wind directions, CARB recommends that Chevron also evaluate short-term air dispersion modeling results as part of the selection of monitoring paths, especially in the areas where there are currently gaps in open-path monitoring and at nearby sensitive receptors.
  - Based on the lack of short-term modeling information and the need to monitor in the gaps identified in the comments above, CARB recommends monitoring along the entire fenceline of the Chevron El Segundo Refinery. If Chevron

proposes to exclude certain sections of the fenceline from monitoring, it should provide a detailed explanation regarding why monitoring is not necessary or feasible for each section of fenceline where monitoring will not be conducted.

- Pages 39 – 40:
    - In the event of monitoring equipment failure, Chevron intends to use UVDOAS and FTIR instruments on the same path as backup for each other. Similarly, if both monitors fail on a given path, Chevron will use the monitors on an adjacent path as backup. However, the Plan does not describe potential limitations, if any, for this approach (e.g., increased detection limits, inability of UVDOAS or FTIR to monitor certain pollutants, monitoring extended paths that exceed maximum path lengths). Also, the plan does not address temporary air monitoring measures for failure of point monitors. CARB recommends that Chevron provide additional information regarding potential limitations related to use of alternative instruments for monitoring and temporary air monitoring measures for failure of point monitors. CARB also recommends that Chevron consider setting up a mobile backup monitoring system similar to the backup systems proposed for the Phillips 66 Carson and Wilmington refineries.
- Page 59
    - Chevron has not provided information regarding the potential communication methods for notifications in the draft plan. CARB recommends that Chevron revise the plan to include this information.

Phillips 66 Carson Refinery:

- Page 7:
    - The Plan does not provide the location of the proposed meteorological station and does not discuss siting considerations, equipment, and time resolution of meteorological measurements, as required by the Guidelines.
- Page 9:
    - The Plan does not identify or discuss eminent sources of non-refinery emissions surrounding the facility, as required by the Guidelines.
    - The Plan provides only an aerial photo of the refinery (Figure 2.1). The Plan does not otherwise identify or discuss the on-site location of operations and processes within the facility's perimeter and the on-site location of emissions sources and level of emissions, as required by the Guidelines.
    - The Plan appears to exclude several pollutants from the air dispersion analysis that are required to be addressed by the Plan (e.g., 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, styrene, hydrogen cyanide) based on a set of four criteria provided at the bottom of page 9 and top of page 10. The Plan does not indicate which criteria were not met for each pollutant. Also, the Plan provides no technical basis for the threshold specified in the first

criterion (i.e., the pollutant must be emitted at greater than 5,000 pounds per year).

- Page 36:
  - The Plan indicates that all portions of the fenceline that are within one mile of a community were considered for open-path fenceline monitoring. However, the plan does not explain how Phillips 66 arrived at this distance as an appropriate metric for consideration of fence-line monitoring.
- Page 37:
  - The Plan appears to exclude fenceline measurements of NOx, and does not provide an explanation for its exclusion.
- Pages 37 – 38:
  - The plan discusses the selection of monitoring paths and point monitors relative to the locations of nearby residential areas, but does not identify or consider other potential sensitive receptors (e.g., schools, day care centers, hospitals, clinics, nursing homes, and recreation areas), as required by the Guidelines.
  - The plan does not identify the time resolution of the fenceline monitoring equipment. Based on the monitoring paths shown in Figure 3.1, it appears that Phillips 66 may alternate the open-path FTIR and UV light source between the two reflectors at the opposite ends of a given path (e.g., the light source at Station MS #1 may alternate between the reflectors at the ends of Paths 1A and 1B). This would not allow for continuous monitoring coverage along any path; continuous monitoring coverage is required by the Guidelines.
- Page 39:
  - Potential black carbon and H_2S impacts on the residential community within a half mile directly to the south of the refinery likely cannot be determined with the current monitoring design. Although winds blow infrequently from north to south, CARB recommends adding a black carbon and H_2S monitoring station near the east end of Path 2A based on the proximity of sensitive receptors directly to the south of the refinery.
- Page 42:
  - In addition to alerts being sent when instrument readings are above preset levels, CARB recommends that the website reference RELs or other health standards with which to compare real-time or averaged data.
- Page 43:
  - CARB recommends the rolling 24-hour data being displayed on the website be extended through several days rather than only one day. Showing several days of data will be more representative of larger trends in the data.
- Pages 46 – 49:
  - The Plan currently provides only a high-level outline of the Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOP) for measurement equipment and indicates that the QAPP and SOPs will be submitted for review and approval by SCAQMD when the final equipment is selected for the fenceline program. This is not consistent with the

requirements of the Guidelines. Most sections of the QAPP and SOPs can and should be completed as soon as possible to allow for public review.

Phillips 66 Wilmington Refinery:

- Page 7:
  - The Plan does not provide the location of the proposed meteorological station and does not discuss siting considerations, equipment, and time resolution of meteorological measurements, as required by the Guidelines.
- Page 9:
  - The Plan does not identify or discuss eminent sources of non-refinery emissions surrounding the facility, as required by the Guidelines.
  - The Plan provides only an aerial photo of the refinery (Figure 2.1). The Plan does not otherwise identify or discuss the on-site location of operations and processes within the facility's perimeter and the on-site location of emissions sources and level of emissions, as required by the Guidelines.
  - The Plan appears to exclude several pollutants from the air dispersion analysis that are required to be addressed by the Plan (e.g., 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, styrene, hydrogen cyanide) based on a set of four criteria provided at the bottom of page 9 and top of page 10. The Plan does not specifically indicate which criteria were not met for each excluded pollutant. Also, the Plan provides no technical basis for the threshold specified in the first criterion (i.e., the pollutant must be emitted at greater than 5,000 pounds per year).
- Page 38:
  - The Plan indicates that all portions of the fenceline that are within one mile of a community were considered for open-path, fenceline monitoring. However, the plan does not explain how Phillips 66 arrived at this distance as an appropriate metric for consideration of fence-line monitoring.
- Page 39:
  - The Plan appears to exclude fenceline measurements of NOx, and does not provide an explanation for its exclusion.
- Page 40:
  - Considering a NW'ly wind is common, there should be an open path monitor placed on the SE corner of the fenceline. Mormon Island and other areas in the Port of Los Angeles appear to be affected by emissions based on the dispersion modeling used in this monitoring plan.
  - The plan discusses the selection of monitoring paths and point monitors relative to the locations of nearby residential areas, but does not identify or consider other potential sensitive receptors (e.g., schools, day care centers, hospitals, clinics, nursing homes, and recreation areas), as required by the Guidelines.
  - The plan does not identify the time resolution of the fenceline monitoring equipment. Based on the monitoring paths shown in Figure 3.1, it appears that Phillips 66 may alternate the open-path FTIR and UV light source between the two reflectors at the opposite ends of a given path (e.g., the light

source at Station MS #1 may alternate between the reflectors at the ends of Paths 1A and 1B). This would not allow for continuous monitoring coverage along any path; continuous monitoring coverage is required by the Guidelines.

- Page 39:
  - Potential black carbon and H_2S impacts on the residential community within a half mile directly to the northwest of the refinery likely cannot be determined with the current monitoring design. Although winds blow infrequently from the southeast, CARB recommends adding a black carbon and H_2S monitoring station at station MS #3 at the northwest corner of the facility based on the proximity of sensitive receptors to the northwest of the refinery.
  -
- Page 44:
  - In addition to alerts being sent when instrument readings are above preset levels, CARB recommends that the website reference RELs or other health standards with which to compare real-time or averaged data.
- Page 45:
  - CARB recommends the rolling 24-hour data being displayed on the website be extended through several days rather than only one day. Showing several days of data will be more representative of larger trends in the data.
- Pages 48 – 50:
  - The Plan currently provides only a high-level outline of the Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOP) for measurement equipment and indicates that the QAPP and SOPs will be submitted for review and approval by SCAQMD when the final equipment is selected for the fenceline program. This is not consistent with the requirements of the Guidelines. Most sections of the QAPP and SOPs can and should be completed as soon as possible to allow for public review.

Tesoro Carson and Wilmington Refineries:

- Page 6:
  - We recommend the open path monitors fully surround both refineries (Carson and Wilmington) along the facility boundary lines. The Carson Refinery has segment/path without open path monitors on the south side of the facility boundary line and two small segments along the west side boundary line. The Wilmington Refinery has most of the north and south side of the refinery without open path monitors.
  - The different colored dots and squares are not defined, and the facility boundaries are difficult to see in Figures 1 and 5. CARB recommends adding a legend that identifies the different types of sensitive receptors and the facility boundaries included in Figures 1 and 5. CARB also recommends changing the color of the facility boundaries.
- Page 7:
  - We recommend each path include all proposed instrumentation (OP UVDOAS with Xenon, OP FTIR, Point H_2S, and Point Aethalometer) in order

to detect all compounds listed on Table 1 of Rule 1180 along the facility boundary lines.

- Page 28:
  - We recommend all proposed instrumentation is used throughout all paths surround the facility to avoid potential gaps in the fence line air monitoring.
- Page 38:
  - The Plan indicates that Tesoro is planning to have a redundant back monitoring system in case the main fenceline system goes offline for longer than 24 hours. However, no additional details are provided regarding this backup system. CARB recommends that Tesoro provide additional details regarding the types and number of monitors that will be included in the backup system.

Torrance Refining Company:

- Page 34:
  - The plan discusses the locations of nearby residential areas, but does not identify or consider other potential sensitive receptors (e.g., schools, day care centers, hospitals, clinics, nursing homes, and recreation areas), as required by the Guidelines.
- Pages 34 – 48:
  - The relative sizes of the blue circles representing emissions levels for the Torrance Refinery and nearby major sources in Figures 5-1 through 5-14 are generally not reflective of the relative levels of emissions of these sources, and suggest that other nearby major sources have emissions that are similar in magnitude to the Torrance Refinery. In most cases, the emissions of any given pollutant from the Torrance Refinery are approximately two orders of magnitude higher than the next highest-emitting nearby major source. CARB recommends scaling the sizes of the blue circles to match the relative emissions levels indicated in the legend, or if this is not practical, inserting a footnote in each legend indicating that the relative sizes of the blue circles do not reflect the relative emissions from these sources.
- Page 64:
  - We recommend air monitors fully surround the facility along its boundary line. If the Torrance Refinery proposes to exclude certain sections of the fenceline from monitoring, it should provide a detailed explanation regarding why monitoring is not necessary or feasible for each section of fenceline where monitoring will not be conducted.
- Page 67:
  - We agree with the proposed weather station location in the Torrance Refining Company site. The proposed location seems to have less nearby buildings/obstructions.
- Page 86:
  - We recommend each path has one OP-FTIR light source per reflector in order to allow for continuous air monitoring, as required by the Guidelines.

One light source alternating between two reflectors for five minutes at a time does not meet our interpretation of continuous monitoring.

- Page 87:
    - We recommend each path have one OP-UVDOAS light source in order to allow for continuous air monitoring, as required by the Guidelines. One ultraviolet light source alternating between two separate paths for five minutes at a time does not meet our interpretation of continuous monitoring.
- Page 87:
    - We recommend black carbon monitors be placed on each path segment along the boundary line of the refinery. We do not agree with only installing black carbon monitors along the north and south fence lines. This approach will not allow for complete fence line air monitoring.
- Page 87:
    - We recommend Hydrogen Sulfide analyzers be placed on each path segment along the boundary line of the refinery. We do not agree with only installing Hydrogen Sulfide analyzers along the north and south fence line. This approach will not allow for complete fence line air monitoring.
- Page 102:
    - The Plan misstates the requirements of Rule 1180 related to alternative or temporary monitoring systems, indicating that such systems are required per Rule 1180 when the continuous monitoring systems are offline for extended periods for maintenance or repair. Rule 1180 does not limit the requirement for alternative or temporary monitoring systems only to extended periods when the monitors are offline (see subparagraph (d)(2)(D)).

Olga Pikelnaya

From: Mike Lansing <mlansing@bgclaharbor.org>
Sent: Wednesday, January 9, 2019 7:15 AM
To: Rule 1180
Subject: Support for Tesoro Fenceline Monitoring Plan
Attachments: Tesoro Fenceline Monitoring Plan Support Letter.pdf

Good morning.

Attached is my letter of support of Tesoro's Fenceline Monitoring Plan in my community. Thank you in advance for your consideration.

Mike

Mike Lansing | Executive Director
Boys & Girls Clubs of the Los Angeles Harbor
mlansing@bgclaharbor.org | 310.833.0807
www.bgclaharbor.org | Facebook | Twitter | YouTube
"First do what is necessary, then what is possible, and suddenly you are doing the impossible."
-Saint Francis of Assisi

BOYS & GIRLS CLUBS
OF THE LOS ANGELES HARBOR

January 8, 2019

Subject Line: Rule 1180 - Tesoro's Fenceline Monitoring Plan

To Whom it May Concern:

By means of this short correspondence, I would like to encourage the SCAQMD to approve Tesoro's proposed Fenceline Air Monitoring Plan. I live/work nearby the Tesoro Carson/Wilmington refinery and would like to see the next phases of the Rule 1180 implemented. Tesoro has been a good partner to our community and their plan makes sense for all.

If you have any questions do not hesitate to contact me. I thank you in advance for your consideration of this appeal.

Respectfully,

Mike Lansing
Executive Director
(310) 833-0807

1200 S. Cabrillo Avenue
San Pedro, CA 90731

T 310 833 1322
F 310 833 4235

www.bgclaharbor.org
www.facebook.com/BGCLAH
@bgclaharbor

Olga Pikelnaya

From: KTB <katiebaad1@gmail.com>
Sent: Wednesday, January 9, 2019 8:51 AM
To: Rule 1180
Cc: Steve Goldsmith
Subject: TRAA comments on Torrance Refinery Rule 1180 Draft Plan for Air Monitoring
Attachments: 2019-01-08_TRAA response to TORC Air Monitoring Plan per Rule 1180.pdf

Dr. Andrea Polidori,

Attached are the Torrance Refinery Action Alliance's comments on the draft Air Monitoring Plan from the Torrance Refinery for Rule 1180.
You will also find two supporting report documents via Google Document links below.
Please confirm receipt and let us know if you have any questions.

Sincerely,
Torrance Refinery Action Alliance (TRAA)
EMail: info@TRAASouthBay.com
Primary Contact: Steve Goldsmith (310) 542-6782

_2019_HF Releases in the South Bay of LA and Els...

_2019_History of MHF at the Torrance Refinery_by...

January 8th, 2018

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast Air Quality District
21865 Copley Drive
Diamond Bar, CA 91765
Delivered via Email: Rule1180@aqmd.gov

TRAA Public Comment
Re: Torrance Refinery Rule 1180 Draft Plan for Air Monitoring

The Torrance Refinery Action Alliance (TRAA) has the following concerns regarding the Torrance Refinery Rule 1180 Draft Plan for Air Monitoring in Torrance, CA.

Page 104/105:
"TORC has a very robust existing hydrogen fluoride monitoring system around the alkylation unit, which is only unit that uses modified hydrogen fluoride (MHF) inside the refinery, to detect any potential unplanned releases. This will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 Plan."

TRAA COMMENT: Fence-line monitoring for HF/MHF must be a part of the Air Monitoring Plan for Rule 1180. Failure and/or poor maintenance of mitigation equipment could result in a wide-spread release of HF that has the potential to move past the fence-line and into the community. There have been on-site releases of MHF in the past at Torrance Refinery, near misses of a catastrophic nature at the Torrance Refinery and large-scale releases which resulted in off-site consequences elsewhere (See attached paper *HF releases in Torrance and Elsewhere* by Dr. Sally Hayati). Without fence-line monitoring to give the community data on the chemical's path of travel the "no off-site consequences" statement cannot be proven.

If HF reaches the fence-line it would be imperative to understand the concentration, speed and direction of the chemical to relay information to emergency personnel to aid in evacuation, community alerts and emergency response. Potential HF release does not only come from the alkylation unit, but also from truck transport and transfer operations. In fact, there was an accidental release of 42 lbs of MHF just 2 weeks ago at the Torrance Refinery "while off loading MHF from a tanker truck to a fixed tank the material leaked out of a 1 inch vapor recovery line" as reported on the Governor's Office of Emergency Services Hazardous Materials Spill Report December 22nd, 2018.

As long as HF/ MHF is in use and/or stored at Torrance Refinery it must be included in the fence-line monitoring plan.

Page 31/32:
"Hydrofluoric Acid (aqueous solution of HF) is a strong acid and is widely used for industrial purposes like glass etching, metal cleaning, and rust removal, some of which are used at refineries. Modified Hydrofluoric acid is used as an internal process catalyst in the alkylation process at some refineries (including TORC) and is carefully controlled and monitored to prevent any unplanned releases to the atmosphere."

TRAA COMMENT: The statement that MHF/HF *"is carefully controlled and monitored to prevent any unplanned releases to the atmosphere"* is an opinion of TORC that is not factual and needs to be stricken from the Plan language. Contrary to TORC's opinion, there is solid data proving otherwise, including accidental releases of MHF/HF at the Torrance Refinery every year but one from 1987 to 2015 with a total reported release amount of 8,688 lbs for that period of time. (See attached paper *History or MHF at the Torrance Refinery* by Dr. Sally Hayati). Furthermore, as reported on the Governor's OES spill report there was an MHF release of 42 lbs at the Torrance Refinery on December 22nd, 2018.

Strike the sentence "*Hydrofluoric Acid is used for industrial purposes like glass etching, metal cleaning and rust removal, some of which are used at refineries."* as the small quantities used in glass etching, metal cleaning and rust removal are inconsequential in comparison with the mass quantities of HF used and stored at TORC. The sentence has no relevance.

Page 48
Ball Metal Beverage Container Corp. is classified as a *"major source of hydrogen fluoride emissions" at 0.010-62 lbs/yr emissions.*

TRAA COMMENT: Include HF emissions from TORC in the figure. Once a gas is released, ruling out off-site path of travel is inaccurate and misleading unless multiple monitors off-site and on the fence-line can prove no off-site HF detection. Substantiate the claim that Ball Metal Beverage Container Corp. is a "major source" of HF emissions with references and timetables of release, otherwise strike from the document.

Page 51, footnote 53
"Although there are no hydrogen fluoride emissions from the refinery and the refinery has never had an off-site modified hydrogen fluoride release, "

TRAA COMMENT: Although HF emissions may be low in probability, they create a very high-risk potential to the community at large. There have been multiple MHF releases on-site in the past at the Torrance Refinery as well as a nearly catastrophic "near miss" on a tank containing 50,000 lbs of MHF on February 18th, 2015 as described by the Chemical Safety Board. Please refer to attached document *HF releases in the South Bay of LA and Elsewhere* by Dr. Sally Hayati to see that HF was accidentally released every year but one from 1987 to 2015, with little, and sometimes zero, disclosure provided to the public. There was also an accidental release of MHF at the Torrance Refinery 2 weeks ago consisting of approximately 42 lbs of MHF. Furthermore, "refinery has never had an off-site modified hydrogen fluoride release" is inaccurate. Off-site and fence-line detection ability was not in-place at the time of on-site HF releases and therefore the statement cannot be substantiated.

The statement in footnote 53 is misleading and should be stricken from the document.

Page 134
"a draft Quality Assurance Project Plan is designed to ensure quality data collection, and to instruct all parties on proper quality control procedures. The draft QAPP has certain elements that have not yet been determined, such as specific names of persons and organizations.... "

TRAA COMMENT: Per Rule 1180 section (d) (2) (E), "procedures for implementing quality assurance by a qualified independent party…" must be included in the fence-line air monitoring plan. The statement above does not identify and provide a "qualified independent party" which is of great importance to the community.

Page 134, footnote 93
"Volume II – Quality Assurance Project Plan, Torrance Refinery Rule 1180 Fenceline Air Monitoring System, prepared for Torrance Refining Company, Ramboll US Corporation…"

TRAA COMMENT: It is our understanding that only Volume I was provided for Public Review and Comment. Provide Volume II for Public Review and Comment.

We appreciate AQMD's due diligence in review and implementation of these matters.

Sincerely,

The Torrance Refinery Action Alliance (TRAA)
Contact: info@TRAASouthBay.com
TRAAsouthbay.com

Attachments:
HF Releases in the South Bay of LA & Elsewhere by Dr. Sally Hayati, PhD
History of MHF at the Torrance Refinery by Dr. Sally Hayati, PhD

Olga Pikelnaya

From: Pearson, Charles@ARB <charles.pearson@arb.ca.gov>
Sent: Wednesday, January 9, 2019 12:30 PM
To: Olga Pikelnaya
Cc: Stroud, Kenneth@ARB; Sutkus, Carol@ARB; Fideldy, Ariel@ARB; Parent, Stephanie@ARB; Ham, Walter@ARB; Guerrero, Joe@ARB
Subject: CARB MLD SCAQMD Rule 1180 Refinery Fenceline Monitoring Plans Comments

Hi Olga,

CARB's Monitoring and Laboratory Division was asked by our management to review and offer comments on SCAQMD Refinery Fenceline Monitoring Plans. Please find below our comments and a summary matrix we used for our review.

COMMENTS:

- Only the Chevron El Segundo plan has an a detailed QAPP which we were able to review.
- Each refinery monitoring website has different planned features and messaging is presented in different ways, having uniformity with the websites would improve public understanding.
- If open path FTIRs are to be used around the refinery, what is the plan during foggy conditions? FTIRs typically do not work well in foggy conditions. Will data be reported during foggy conditions which occur mostly in the morning and evening. We would like to have some understanding of how many sampling days and hours they expect to get throughout the year?

Thank you

Charles Pearson, Manager
California Air Resources Board
Monitoring and Laboratory Divison
Incident Air Monitoring Section

Summary of SCAQMD Fenceline Air Monitoring Plans

Refinery	Chevron El Segundo Refinery	Torrance Refinery	Phillips 66-Carson Refinery	Phillips 66-Wilmington Refinery
Purpose of monitoring	To monitor pollutants listed in Table 1 of r1180 (except for HF) at the refinery using open path and other technologies along the fencline that have the potential to migrate to offsite, especially to residential and sensitive receptors.	To monitor pollutant listed in Table 1 of r1180 including hydrogen fluoride at or near refinery fenceline that may have the potential to migrate offsite, especially to residential and other sensitive receptors.	To monitor pollutants listed in Table 1 of r1180 (except for HF)and additional pollutants using open path technologies and point monitoring equipment that have the potential to migrate offsite especially to residential and sensitive receptors.	Same as Phillips 66-Carson refinery
Continuously monitoring equipment	Use 11 open path (OP) FTIRs (total VOC and other organics), UVDOAS (BTEX), Aethalometer (BC), UV fluorescence (H2S), meteorological and visibility instruments to measure pollutants described in Table 1 of r1180, except for HF. Two meteorological systems will be installed.	Use six each of OP FTIR (total VOC and other organics), UVDOAS (BTEX and SO2), and four each of fixed Aethalometer (BC) and UV and fluorescence (H2S) monitors to measure pollutants described in r1180. Each OP analyzer will be mounted on a computer controlled auto-positioning pan and tilt pedestals to allow rotate alternately between two reflectors every 5-min	Three OP FTIR (total VOC and other organics), UVDOAS (BTEX and SO2), Aethalometer (BC), H2S sensor (H2S), and passive diffusion tubes (benzene) to measure pollutants listed in r1180. One meteorological system will be installed.	Same as Phillips 66- Carson but have additional multipath UV included.

			interval per retroreflector. There are 6 analyzers and 12 retroreflectors for each type. To monitor around hydrogen fluoride plant, in addition to the 27 electrochemical sensors inside the unit, one OP TDLAS encircles HF plant. New OP TDLAS will be installed encircling HF and acid evacuation units. One new meteorological system will be installed.				
Equipment siting	For instrument siting, refinery's geographical location, meteorology, surrounding communities, sensitive receptors, and other possible polluting sources, and logistics will be taken into account. Dispersion model will be used to estimate pollutant dispersion pattern. Instruments will be placed along the fenceline in all		For instrument siting, locations of nearby communities and sensitive receptors, meteorology, results of dispersion modeling, type of monitoring technologies, logistics, and recommendations from SCAQMD will be considered. The modified HF and acid alkylation units will be encircled with OP TDLAS.		For instrument siting, refinery's geography, nearby communities, meteorology, dispersion model results, and logistics will be considered. OP FTIR, UVDOAS, diffusion tubes, and other point sampling system (e.g. Aethalometer) will be placed along the fenceline in all four directions of the refinery. One		Same as Phillips 66-Carson refinery

	directions of the refinery.			meteorological system will be installed.			
Routine maintenance requirements	Planned routine maintenance of equipment are given in Tables 7, 8, 9, and 10. Monthly, quarterly and annual maintenance for UVDOS including semi-annual for FTIR. UV fluorescence H2S monitoring equipment will be maintained weekly, monthly, quarterly and annually. Aethalometers will be maintained monthly, semiannual and on annual basis.		The report indicates that planned routine maintenance and services are provided in QAPP, which is presented in Volume II of the report. But Volume II is not provided.	System maintenances based on real-time error, monthly, quarterly, and annual are mentioned in the table of content of the QAPP. QAPP is not provided.		Same as Phillips 66-Carson refinery	
Temporary monitoring plan during instrument maintenance and failure	In case of instrument failure, effort will be made to fix. If not successful, will obtain replacement parts. Because UVDOS and FTIR will be installed along all paths the working ones will be used as a		In case of equipment failure, efforts will be made to fix as soon as possible. If the failure lasts more than one day, the working OP will be used as a backup. If OP-FTIR and OP-UVOAS are offline for more than a one week, a passive	In case of instrument failure that lasts more than 24-hrs, a mobile air monitoring system equipped with FTIR, UVDOAS, BC, and H2S monitors will be installed and deployed in the refinery. This mobile		Same as Phillips 66-Carson refinery	

	backup for the one that failed. If not fixed within 24-hrs, Chevron will respond with written notification. Within 2 hours of problem, will notify SCAQMD Executive Officer		sampling device s will be installed using USEPA Method 325A. If both OP systems are offline for more than one month, passive evacuated canisters (SUMMA or similar) will be manually deployed. Similarly backups are planned for BC and SO2 instruments.		system will be used during monitoring equipment breakdown, power outages, weather events, and other unplanned conditions that can affect regular monitoring.		
Data management, QA/QC procedures, and audit	Table 11 provides typical QA/QC checklist. Data management system (DMS) will be used to check for QC, detect outlier, and create alerts. Automated data screening system will be used to remove invalid data and check for ranges, sticking, missing, etc. data points. Table 12 provides test and criteria for performance audits. Audits to be performed by a qualified independent party and internal audit units.		Section7 refers to data presentation and dissemination. DMS will automatically check for QC/QA , invalid data, range, sticking, rate of change, instrument codes and alarms, and beam intensity for OP instruments. Table 7-2 provides criteria used to invalidate data.		Tables 5.1 and 5.2 provide real-time data QC checks and instrument performance checks. These include low signal alarm, error code, workstation offline, internet connection loss, and high detection (above threshold). Table 5.3 provides monthly data validation checks.		Same as Phillips 66-Carson refinery

Fenceline monitoring plan	11 UVDOAS and FTIRs are placed around the refinery in addition to the Aethalometers and UV fluorescence placed around the fenceline.	Six each of OP FTIR and UVDOAS with 12 reflectors, and four each of Aethlometers and UV fluorescence on north and south sides of the refinery.	Three each of FTIR and UVDOAS along with other point samplers around the refinery fenceline.	Same as Phillips 66-Carson refinery
Data dissemination methods	Data will be disseminated to the public using website that is linked to DMS. Display includes visual display of data in real-time, keys to help understand the data, monitoring technique, etc. Educational materials, objectives and capabilities of monitoring system, description of pollutants, measurement techniques, etc. will be provided.	Monitoring data will be made available public via internet website. The site will display data in 'real-time' as collected and processed. The DMS will collected data, automatically check for data quality, and provide updated data online. The website, in addition to real-time data, will provide educational materials, quarterly summary reports, etc.	Real-time data will be provided to the public via a website. The website will be developed with input from community. The site will include a message board, QC/QA checks, etc. Public can communicate back via email.	Same as Phillips 66-Carson refinery
Public notification	Public will be notified via the website if concentration of pollutants reach threshold levels.	Public will be notified via publicly available website if concentration of pollutants reach threshold levels. Tiered notification system based on increasing pollutants	Public will be notified via refinery's website if concentrations of pollutants reach the threshold values	Same as Phillips 66-Carson refinery

		concentrations and other notification system will be developed.		
Quality Assurance Project Plan (QAPP)	Detailed QAPP is provided. It includes instrument selection, siting, operation and maintenance, data management objectives, data quality objectives and criteria, data management, routine equipment and data audits, standard operating procedures and data completeness.	Section 9 provides the outline of QAPP citing Rule 1180. Draft QAPP is provided in Volume II, which is not available for review.	The outline of QAPP document is provided. The content include project management**,** description of fenceline monitoring and program, hardware, quality management system, maintenance etc. It indicates that QAPP will be sent to SCAQMS for approval. Not available for review.	Same as Phillips 66-Carson refinery
Overall Comments	Overall the plan meets the R1180 and AB 1647 requirements. The provided QAPP seems to be adequate to ensure reliable data quality.	The type and number of instruments, siting, and temporary monitoring plans are adequate and meets the 1180 rules. However, QAPP is not provided here to comment on the QA/QC aspect of monitoring	The type and number of instruments, siting, and temporary monitoring plans are adequate and meets the 12180 rules. However, QAPP is not provided here to comment on the detailed QA/QC aspect of monitoring	Same as Phillips 66-Carson refinery

Olga Pikelnaya

From: Louise Fleming <louiserfleming1@gmail.com>
Sent: Wednesday, January 9, 2019 1:06 PM
To: Rule 1180
Subject: Mandate MHF/ HF to be included in Rule 1180

Dear AQMD Staff,

It is imperative that MHF/ HF be included in the Rule 1180 fenceline mitigation rule.

Failure and/or poor maintenance of mitigation equipment could result in a wide-spread release of HF that has the potential to move past the fence-line and into the community. There have been on-site releases of MHF in the past at Torrance Refinery, have been near misses of a catastrophic nature at the Torrance Refinery and large-scale releases elsewhere. Without fence-line monitoring to give the community data on the chemical's path of travel the "no off-site release" statement cannot be proven. If HF reaches the fence-line it would be imperative to understand the concentration, speed and direction of the chemical to relay to emergency personnel to aid in evacuation, community alerts and emergency response. Therefore, as long as HF/ MHF is in use at Torrance Refinery it must be included in the fence-line monitoring plan.

Olga Pikelnaya

From: Courtney Baradel <courtneybaradel@gmail.com>
Sent: Wednesday, January 9, 2019 8:10 PM
To: Rule 1180
Subject: We need fence line air monitoring!

The Torrance Refinery is toying with the wells being and safety of others on a daily basis. Who knows when the next "big one" will hit and what damage that would cause to the refinery. They have had MHF leaks and not even know the cause!

Sent from my iPhone

Olga Pikelnaya

From: Bwh031451 <bwh031451@gmail.com>
Sent: Wednesday, January 9, 2019 8:33 PM
To: Rule 1180
Subject: Mandate MHF/ HF to be included in Rule 1180

Dear AQMD Staff,

It is imperative that MHF/ HF be included in the Rule 1180 fenceline mitigation rule.

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Brian Hitchcock
At Large
Email: bwh031451@gmail.com

Olga Pikelnaya

From: Sakamoto, John <Sakamoto@eichleay.com>
Sent: Thursday, January 10, 2019 9:35 AM
To: Rule 1180
Cc: Sakamoto, John
Subject: Eichleay Supports Chevron Plan for SCAQMD Rule 1180
Attachments: 2018 0110 Chevron Plan for SCAQMD 1180.pdf

See Attached Letter

Dear Dr. Polidori:

This letter is in response to the SCAQMD's (District) request for comments to the Plans submitted by the area refineries to Rule 1180, Refinery Community Air Monitoring Plans that were published on the District's website during the week of December 10th, 2018.

Eichleay, Inc, supports the Plan as submitted by the Chevron El Segundo Refinery.

The Chevron Refinery provides economic vitality to the region in terms of well-paying jobs, major support to the community organizations and locally owned / operated businesses. It is also responsible for producing economically available fuels used for commuting to and from work, to family activities, and much more.

We do share the concerns as to what constituents are emitted by the refineries that may have impact to our personal health and/or environmental quality. Rule 1180 is a great step forward to obtaining a clearer understanding of potential impacts by more explicit measures and reporting of these emissions. This rule will also help us to understand the apportionment of emissions to other localized sources. This information will be vital to focusing solutions for reducing these emissions.

We note that in the District's Rule calendar's original schedule for this comment phase was to be completed by November 2018. Given that we are already beyond that date we would like to see prompt approval of the Chevron El Segundo Plan as submitted so that the next phases of the Rule can be promptly developed and implemented.

Our employees both work and in many cases reside close to the El Segundo facility and consider ourselves stakeholders to the process. We are committed to a sustainable California economy which promotes the health and livelihood of its citizens. Thank you.

Sincerely,
John Sakamoto

Eichleay
John Sakamoto, P.E.
Executive Vice President
1390 Willow Pass Road | Suite 600 | Concord, CA 94520
Direct: 925-363-3152
sakamoto@eichleay.com | www.**eichleay**.com

Eichleay

TEL 925.689.7000
FAX 925.689.7006

1390 Willow Pass Road, Suite 600
Concord, CA 94520

www.eichleay.com

January 10, 2019

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

Attention: Dr. Andrea Polidori
Atmospheric Measurement Manager
Email: Rule1180@aqmd.gov

Subject: Eichleay Supports Chevron Plan for SCAQMD Rule 1180

Dear Dr. Polidori:

This letter is in response to the SCAQMD's (District) request for comments to the Plans submitted by the area refineries to Rule 1180, Refinery Community Air Monitoring Plans that were published on the District's website during the week of December 10th, 2018.

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Our employees both work and in many cases reside close to the El Segundo facility and consider ourselves stakeholders to the process. We are committed to a sustainable California economy which promotes the health and livelihood of its citizens. Thank you.

Sincerely,

John Sakamoto, P.E.
Executive Vice President

Olga Pikelnaya

From: Piazza, Bill <bill.piazza@lausd.net>
Sent: Thursday, January 10, 2019 10:28 AM
To: Rule 1180
Cc: Schanen, Patrick; Espinoza, Anthony
Subject: LAUSD Rule 1180 Public Comment Submittal

To SCAQMD Rule 1180 Staff –

On behalf of the Los Angeles Unified School District, the Office of Environmental Health and Safety (OEHS) appreciates the opportunity to comment on the draft Rule 1180 Refinery Fenceline Air Monitoring Plans (Plan) submitted by the various refinery owner/operators. OEHS will defer general comment to SCAQMD staff on the adequacy of the identified plan elements submitted for review. We ask, nonetheless, that additional specificity be included related to the following:

- Provide specific names and addresses of sensitive receptors affected by refinery operations based upon the dispersion modeling exercise specified in the Plan Guidelines.

- Provide additional detail regarding the dissemination of public information and outreach to identified sensitive receptor populations affected by refinery operations.

- The Plan should ensure that background pollutant concentrations are "real-time" to provide relevant comparison/context to pollutant levels measured at the facility fenceline. For example, available concentration data for toxic compounds associated with 1 and 8-hour exposure durations is limited whereby "typical background" comparisons would not be possible.

- Ensure that notification of threshold exceedances are consistent for all refinery owner/operators and provide additional detail regarding methods of communication to receptors potentially affected by the pollutant exposure(s).

Please note that OEHS expresses concern that Rule 1180 and its related Plan requirements do not effectively address public alert and communication mechanisms in a manner coincident with first response systems should a threshold exceedance occur. We find this inclusion appropriate to ensure the protection of public health.

I can be reached at (213) 241-2576 should you have any questions or request clarification of our comments.

Best Regards,

Bill Piazza
Office of Environmental Health and Safety
Los Angeles Unified School District
(213) 241-2576

Olga Pikelnaya

From: John Hull <john@jmhull.com>
Sent: Thursday, January 10, 2019 10:44 AM
To: Rule 1180
Subject: Re: Torrance Refinery Rule 1180 Draft Plan for Air Monitoring

I'm a Torrance resident that is very concerned about the lack of air monitoring around the Torrance Refinery. At the suggestion of Torrance Refinery Action Alliance I am including their comments regarding TORC's draft plan for Rule 1180. I agree with TRAA's comments and hope the health and safety of people that live and work near the refinery outweigh Torrance Refinery's views in the final version of air monitoring plan.

Thank you,
John Hull

> The Torrance Refinery Action Alliance (TRAA) has the following concerns regarding the Torrance Refinery Rule 1180 Draft Plan for Air Monitoring in Torrance, CA.
>
> Page 104/105:
>
> *"TORC has a very robust existing hydrogen fluoride monitoring system around the alkylation unit, which is only unit that uses modified hydrogen fluoride (MHF) inside the refinery, to detect any potential unplanned releases. This will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 Plan."*
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TRAA COMMENT: The statement that MHF/HF *"is carefully controlled and monitored to prevent any unplanned releases to the atmosphere"* is an opinion of TORC that is not factual and needs to be stricken from the Plan language. Contrary to TORC's opinion, there is solid data proving otherwise, including accidental releases of MHF/HF at the Torrance Refinery every year but one from 1987 to 2015 with a total reported release amount of 8,688 lbs for that period of time. (See attached paper *History or MHF at the Torrance Refinery* by Dr. Sally Hayati). Furthermore, as reported on the Governor's OES spill report there was an MHF release of 42 lbs at the Torrance Refinery on December 22nd, 2018.

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Page 134

"a draft Quality Assurance Project Plan is designed to ensure quality data collection, and to instruct all parties on proper quality control procedures. The draft QAPP has certain elements that have not yet been determined, such as specific names of persons and organizations…."

TRAA COMMENT: Per Rule 1180 section (d) (2) (E), "procedures for implementing quality assurance by a qualified independent party…" must be included in the fence-line air monitoring plan. The statement above does not identify and provide a "qualified independent party" which is of great importance to the community.

Page 134, footnote 93

"Volume II – Quality Assurance Project Plan, Torrance Refinery Rule 1180 Fenceline Air Monitoring System, prepared for Torrance Refining Company, Ramboll US Corporation…"

TRAA COMMENT: It is our understanding that only Volume I was provided for Public Review and Comment. Provide Volume II for Public Review and Comment.

We appreciate AQMD's due diligence in review and implementation of these matters.

Sincerely,

The Torrance Refinery Action Alliance (TRAA)

Olga Pikelnaya

From: Suzanne Sinclair <suzsin@cox.net>
Sent: Thursday, January 10, 2019 10:49 AM
To: Rule 1180
Subject: Torrance refinery

Refinery
As a South Bay resident I am alarmed to learn that on
page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/ HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.
Suzanne Sinclair

Olga Pikelnaya

From: Carole Westberg <carole.westberg@gmail.com>
Sent: Thursday, January 10, 2019 11:00 AM
To: Rule 1180
Subject: Torrance Refinery Rule 1180

I live within the area that would be affected by a leak of MHF/HF from the Torrance Refinery. I do not believe that the refinery's safely systems are sufficient to prevent a leak that may be deadly to me and my family. I understand that the Refinery's plan for ensuring my safety does not include fence-line monitoring systems for these dangerous gases. Their existing safety systems have been breached in the past and if their history of unplanned flares is indicative of their safety measures they are far from instilling confidence in their integrity as a company.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Sincerely
Carole Westberg

.....

Sent from my iPad
Sent from my iPad

Olga Pikelnaya

From: Erica <avick1212@aol.com>
Sent: Thursday, January 10, 2019 11:04 AM
To: Rule 1180
Subject: Rule 1180 at the Torrance Refinery

Subject: Rule 1180 at the Torrance Refinery
As a South Bay resident I am alarmed to learn that on
page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/ HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Thank you.
Erica Vickers

Sent from my iPad

Olga Pikelnaya

From: Margie Hernandez <margiehpadilla@hotmail.com>
Sent: Thursday, January 10, 2019 11:29 AM
To: Rule 1180
Subject: Rule 1180 - Tesoro's Fenceline Monitoring Plan

To AQMD Staff:

I would like to convey my absolute support for Tesoro's Fenceline Monitoring Plan and hope that it will be approved as quickly as possible. I live very close to the Tesoro facility in Carson and this monitoring plan would be extremely beneficial for all local residents.

Tesoro (now Marathon) has been a good neighbor and I know they would like to implement the monitoring plan as soon as possible. Any efforts you can make to insure that Rule 1180 implementation moves forward as quickly as possible would be greatly appreciated by all of us who live near the refinery.

Thank you for your attention.

Margaret Hernandez

Olga Pikelnaya

From: Gengh <geng001@socal.rr.com>
Sent: Thursday, January 10, 2019 12:38 PM
To: Rule 1180
Cc: Gengh
Subject: 2019-01-10_GEng_Concerns-and-Comments_re-Rule1180-ToRC-Plans/Appendix
Attachments: 190110_GEng_Concerns-re-ToRC-Rule1180_Plan-and-Appendix.pdf

Dear Dr. Andrea Polidori,

Attached please find the document:

"190110_GEng_Concerns-re-ToRC-Rule1180_Plan-and-Appendix.pdf"

submitted as a formal Pubic Comment regarding the Torrance Refining Company (ToRC)

Rule 1180 "*Torrance Refinery Draft Plan*" and "*Torrance Refinery Appendix A*",

which I believe needs important enhancements and additions

with regard to monitoring and reporting potential releases of

Hydrogen Fluoride (HF) and Modified Hydrogen Fluoride (MHF),

in order to be properly protective of the Public Health and Safety.

Most Sincerely,

(Dr.) Genghmun Eng

Citizen Concerns regarding the Torrance Refining Company (ToRC) Rule 1180 "*Torrance Refinery Draft Plan*" and "*Torrance Refinery Appendix A*"

Comments respectfully Submitted by: Dr. Genghmun Eng, 5215 Lenore St., Torrance, CA 90503, 1/10/2019

Because gaseous HF is such a dangerous chemical when released into the human environment, careful review of both the Torrance Refining Company (ToRC) Rule 1180 Draft Fenceline Plan ("T-Plan") and the Torrance Refining Company (ToRC) Rule 1180 Draft Plan Appendix A ("T-Appx") need to consider and evaluate more scenarios than are present in those documents. Several document insufficiencies are also noted, which require document enhancement.

Item 1: First using Fig. A-43 (T-Appx p.45) for Toluene as an illustrative example, the highest Toluene expected Fenceline concentration at ~1.8m (human height) is given as ~160 micrograms/m^3 averaged over 1 hour which is ~0.04 ppm-hours of gaseous Toluene exposure, as a worst case for NORMAL Refinery operation. Toluene has a 20.C vapor pressure of ~0.029 atm. In contrast, the Figs. A-127 to A-135 for MHF (Modified Hydrogen Fluoride) have no concentration scale. The scales which were used to generate those Figures needs to be included, and they should also specify that it is for the gaseous Hydrogen Fluoride ("HF") which emanates from the MHF.

At 20.C, where HF has a vapor pressure that is nearly 34.5X larger than Toluene, which would give ~1.38 ppm (1236 micrograms/m^3) of HF at the Fenceline for NORMAL Refinery operation, for an HF source that was similarly-sized to the Toluene source that was modeled. The difference between Toluene and HF/MHF is that there are no 50,000 lb Settler Tanks and Storage Tanks on-site for Toluene. Thus, Fenceline modeling of the type given in the T-Appx figures also needs to be done with HF/MHF release concentrations for the following ABNORMAL Refinery conditions:

50,000 lbs of HF/MHF released respectively over the course of 3 minutes, 10 minutes, 30 minutes, 1 hour or 8 hours.

10,000 lbs of HF/MHF released respectively over the course of 3 minutes, 10 minutes, 30 minutes, 1 hour or 8 hours.

1,000 lbs of HF/MHF released respectively over the course of 3 minutes, 10 minutes, 30 minutes, 1 hour or 8 hours.

100 lbs of HF/MHF released respectively over the course of 3 minutes, 10 minutes, 30 minutes, 1 hour or 8 hours.

10 lbs of HF/MHF released respectively over the course of 3 minutes, 10 minutes, 30 minutes, 1 hour or 8 hours.

The reason that release time-scales shorter than a 1-hour average are needed for HF/MHF is because gaseous HF has AEGL-2 (Serious and Irreversible Health Effects) limits {95, 34, 24, 12} ppm and AEGL-3 (Life-Threatening or Death) limits {170, 62, 44, 22}ppm, as standard tabulated values for {10, 30, 60, 240} minute HF exposures. As such, each of those time periods needs to be separately considered. The addition of a 3-minute time interval for a large-scale HF/MHF release needs to be separately studied to accomodate the possibilty of response-time failures and time-delays during a catastropic acutal release event, such as what might occur during an Earthquake or a Terrorist Attack.

Item 2: As noted in the "Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines", HF monitors are needed *"to ensure a rapid detection of accidental leaks to subsequently provide warning and real-time alerts ... for the protection of refinery workers and the nearby communities in the vicinity of the refinery."* All HF monitors should be able to accurately detect, record, and transmit HF values. Monitors covering several airborne HF concentration ranges should be employed, including (A) Sensitive HF Monitors capable of detecting airborne HF below the 1 ppm level, (B) Intermediate HF Monitors capable of accurately detecting airborne HF at the 1-100 ppm level, and (C) High Value HF Monitors capable of detecting airborne HF at the 100-10000 ppm level.

Item 3: As noted in the "Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines", ToRC may be able to be exempt from HF measurements at the Fenceline, if they "*demonstrate in the air monitoring plan that HF concentrations are adequately monitored and reported at the alkylation unit*". In addition, "*some monitors should ideally be placed near the alkylation unit*". Having HF monitors both at the alkylation unit, as well as near the alkylation unit, would enable emergency responders to better assess the size and rate of dissipation of an HF cloud arising from an HF/MHF Tank/Enclosure Breach. A critical region of the Alkylation Unit for enhanced HF monitoring would be where the MHF Additive is separated out and collected, leaving a column of enriched HF. An Tank/Enclosure Breach in this Alkylation Unit portion with enriched HF could be more serious than an HF/MHF breach elsewhere.

Item 4: In order to "*demonstrate in the air monitoring plan that HF concentrations are adequately monitored"* so as to potentially qualify for an exemption from HF measurements at the Fenceline, HF Monitors capable of providing accurate data over the entire HF range of (A), (B), and (C) of **Item 2**, should also be placed in the following critical areas:

(a) In and around the HF/MHF Settler Tanks,

(b) In and around the HF/MHF Transfer Area, where vehicles offload HF/MHF that comes from outside the Refinery.

(c) In and around all Pipelines and Pipeline Flanges that are used to transport HF/MHF from one area in the Refinery to another area.

in addition to those noted in the above **Item 3**.

Item 5: Since the Koopman Nevada Desert ("Goldfish Test") release of ~8000 pounds of anhydrous HF showed toxic HF levels above 170 ppm at heights greater than 25 meters occurring as far away as 1 kilometer from the original release point, all HF monitoring needs to be implemented from the ground level up through a height of at least 25 meters, covering all areas of the Refinery, to account for differing wind directions. Monitors capable of providing accurate data over the entire HF range of (A), (B), and (C) of **Item 2**, should also be used over this entire height.

SCAQMD Rule 1180 Contact Data: Comments/Concerns directed to **Rule1180@aqmd.gov**

Dr. Andrea Polidori, SCAQMD Atmospheric Measurements Manager, (909) 396-3283

Dr. Olga Pikelnaya, SCAQMD Atmospheric Measurements Group, (909) 396-3157

Mailing Address: SCAQMD, 21865 Copley Drive, Diamond Bar, CA 91765

Olga Pikelnaya

From: Laura Barnes <laura@thebarnes.com>
Sent: Thursday, January 10, 2019 2:30 PM
To: Rule 1180
Subject: Rule 1180 at the Torrance Refinery

Subject: Rule 1180 at the Torrance Refinery
As a South Bay resident I am alarmed to learn that on page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Laura Barnes

Olga Pikelnaya

From: Sally H <sallyhayati@gmail.com>
Sent: Thursday, January 10, 2019 3:12 PM
To: Rule 1180
Subject: Written Comments on ToRC draft plan, Rule 1180- -Sally Hayati --Ban Toxic MHF
Attachments: 2019-01-10 Sally Hayati-Ban Toxic MHF-Rule 1180 comments.pdf

Attached please find a PDF document containing comments on the Torrance Refinery Draft Plan for Rule 1180. I include one comment on Rule 1180 Guidelines that relates to ToRC's plan, due to their use of MHF.

Thank you,

Sally Hayati, Ph.D
Founder, Ban Toxic MHF
310-210-5516

SCAQMD Rule 1180 Oil Refineries Fenceline Air Monitoring

Comments on Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines
Comments on Vol. 1 Draft Plan, Torrance Refinery

Sally Hayati, Ph.D.
Founder, Ban Toxic MHF (former Pres. TRAA)
January 10, 2019

Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines

i**. Chemical Species of Interest. Hydrogen Fluoride**. Page 11 (PDF p. 13)

Although Rule 1180 allows air-monitoring systems to be "at ***or near*** the property boundary," in the case of HF it is essential that monitoring be conducted at the fenceline itself or immediately *outside*. The distinction is important. HF is toxic at low concentrations. HF can travel for miles as a *dense* vapor cloud that can be deadly or cause serious injury for over a dozen miles depending on the amount released. Wind direction rotates around the compass on a daily basis in the South Bay so the plume can travel in any direction.

Every refinery boundary (N, S, E, W) should have HF monitors providing full coverage at the fenceline so no HF plume can drift out undetected. Without such monitors, the refineries will continue denying that HF has ever gone offsite, even if it has, because no documentation exists and none can be acquired.[1]

The refineries have been allowed, uncontested by government authorities, to use this to argue, prima facie, that the absence of documentation proves no offsite release has occurred. The absence of documentation is given proudly as proof of community safety, whereas it is proof of nothing more than government laxity.[i]

It is entirely possible, given the unit's proximity to Crenshaw, that HF has in fact escaped the refinery grounds during larger releases, particularly in 1987, 1988, 1995 -1997, 1999, and 2004 (graph next page[ii, iii]). These relatively large releases were unreported by the press and unknown to the public. No press report on an HF release at the refinery has ever reported more than than a few drops or a couple pounds released. This is unacceptable, yet the current wording of Rule 1180 would perpetuate the current situation.

[1] Unless a release is large enough to persist for hours, giving time for outside monitors to be brought in.

YEAR	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00
LB.	1000	1500	250	250	380	385	350	350	410	410	430	310	620	130
YEAR	'01	'02	'03	'04	'05	'06	'07	'08	'09	'11	'12	'13	'14	'15
LB.	16	81	3	890	170	343	343	27	25	3	3	2	2	5

There is no clause in this exemption to make alky unit monitor data available to the public in real time, as fenceline data would be. HF is an extremely hazardous chemical at low concentrations. Highly questionable claims are made for very low MHF volatility compared to HF (90% "credit" is taken on the EPA WC report). The community deserves the facts.

Fenceline monitoring is meant to grant communities the right to know which chemicals waft into their neighborhoods at which concentrations and with what frequency. As the EPA notes, such monitoring "ensure[s]… that neighboring communities are not being exposed to unintended emissions."[iv] The proposed use of the "existing HF monitoring system" does not meet this objective.

The current unacceptable situation will continue, in which there's no proof but also no information or discussion regarding actual HF releases large enough to have escaped the refinery grounds. The spirit of Rule 1180 will be violated if SCAQMD accepts the alky unit's current HF monitoring system "as the alternative HF monitoring system for purposes of this Rule 1180 plan."

Furthermore, this would mean the responsibility and cost of documenting HF releases into the community would remain with the public, using monitors brought in from outside. Only these two refineries, out of ten in California, chose HF over sulfuric acid, acquiring a marginal profit advantage over those putting safety first. The two HF refineries should pay any and all costs associated with that choice.

The cost of fenceline monitoring for HF alkylation in LA County is perfectly "reasonable," given the level of risk the community faces. HF alkylation in LA County is "unreasonable." The tone of Torrance's draft plan is a warning sign. ToRC is not interested in safe and transparent alky unit operations, but only in denying MHF hazards, which are in fact identical to HF.

The AQMD's exemption of HF from fenceline monitoring shows how unwilling the AQMD is to push back on the last two HF refineries in densely populated LA County. MHF's continued use was based on strong MHF safety claims we now know are false. The SCAQMD itself acknowledges *MHF does not meet the acceptance criteria established by the SCAQMD*, that MHF eliminate the use of concentrated HF in refineries in the district. MHF is concentrated HF.[2]

If the SCAQMD exempts HF from fenceline monitoring, the effect of that decision, if not the objective the SCAQMD desires, will be to keep the public in the dark regarding the reality of MHF hazards. This is concerning, given AQMD's current "concept" for Rule 1410, which ignores expert opinion on the weaknesses and vulnerabilities of mitigation systems, admitted

[2] Concentrated HF (>80%) with additive. MHF is 94% HF by weight at Valero, 93% by weight at Torrance. Chart 5 in SCAQMD staff presentation. SCAQMD, Refinery Committee, 2018-09-22, Meeting, Agenda and all presentations, http://bit.ly/2OPwPxH

by industry experts to be unreliable guarantors of public safety. This is why Superior WI evacuated residents during the out of control fire at the Husky refinery. We cannot evacuate here.

Vol. 1 Draft Plan, Torrance Refinery

1. Section 3.2 Refinery Operations and Emissions, page 11 (PDF p. 20) Footnote 9.

> "There are no estimated emissions of hydrogen fluoride because its process use is closed loop."

ToRC is presenting a façade of infallibility. Despite the fact that HF emissions are not deliberate or routine, HF emissions can and do occur. In fact, *yearly releases occur* as shown in this graph of the refinery's self reported HF emissions from 1987 to 2015, ranging from 0 lb. (2010) to 1,000 lb. per year since 1987, averaging 300 lb. per year for that time period.[v, vi]

YEAR	**'87**	**'88**	**'89**	**'90**	**'91**	**'92**	**'93**	**'94**	**'95**	**'96**	**'97**	**'98**	**'99**	**'00**
LB.	1000	1500	250	250	380	385	350	350	410	410	430	310	620	130
YEAR	**'01**	**'02**	**'03**	**'04**	**'05**	**'06**	**'07**	**'08**	**'09**	**'11**	**'12**	**'13**	**'14**	**'15**
LB.	16	81	3	890	170	343	343	27	25	3	3	2	2	5

An average HF release should be estimated over some reasonable period of time. Since larger HF releases are less frequent but very high risk to workers and the community, a period of two decades or more actual experience with accidental HF releases should be considered to give a meaningful estimate.

The "closed loop" nature of alkylation is mentioned to reinforce a false concept that no HF can possibly escape from the process equipment. The refinery brings in fresh MHF at the rate of some 4 trucks per month. If the process is a fully closed loop in which the HF catalyst is regenerated, reused, and never consumed or lost, why is new HF required with such frequency? Some HF may be retained in alkylate (the product), and would be burned inside a vehicle. Some HF could remain in ASO and be disposed of along with that material. Possibly some HF is released in other ways, potentially into the atmosphere. These could potentially be other sources of HF pollution.

2. Table 4-1, Target air pollutants for ToRC fenceline air monitoring system, page 28 (PDF p. 37) Footnote 38.

The "closed loop" nature of the alkylation process is again mentioned, reinforcing the false concept that no HF can possibly escape from the process equipment.

3. Section 4.2.3 Other Compounds, Page 31/32 (PDF p. 40):

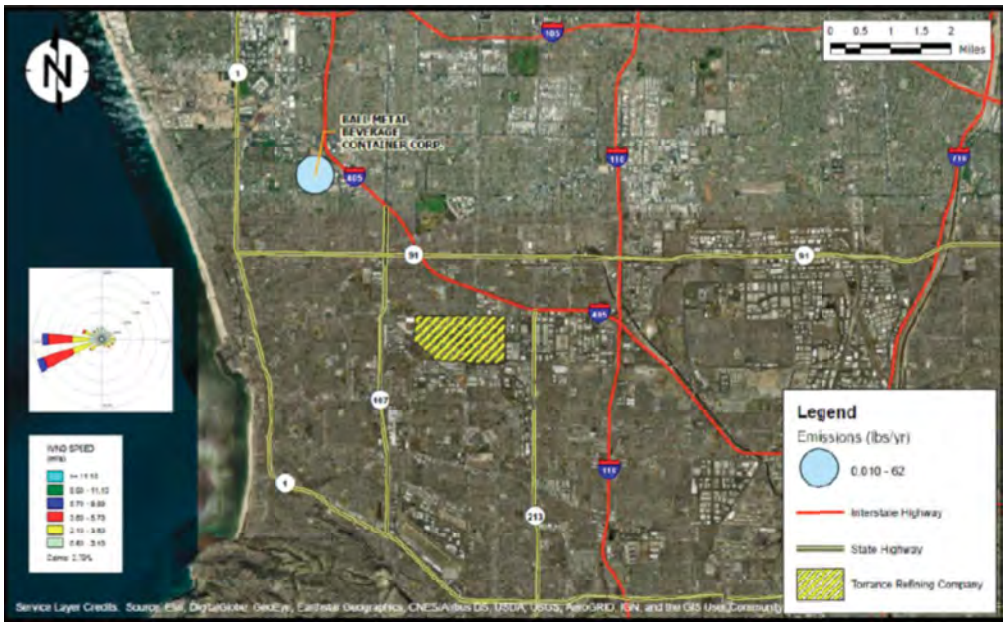
> "Hydrofluoric Acid (aqueous solution of HF) is a strong acid and is widely used for industrial purposes like glass etching, metal cleaning, and rust removal, some of which are used at refineries. Modified Hydrofluoric acid is used as an internal

The statement in blue is awkwardly worded in what seems a deliberate attempt to mislead. "Some" HF is used at refineries, but HF is "widely" used for other applications. In fact, refineries have very significantly larger amounts of HF onsite, and both store and use HF at much greater temperatures and pressures than any other industrial use in Southern California. Furthermore, at refineries, HF is mixed with hydrocarbons during processing, which increases HF's volatility and adds the risk of explosions that could accidentally release HF.

The statement in red is deceptive. The refinery may make efforts, but there is no guarantee unplanned releases can't occur. In fact, *yearly releases occur* as shown in this graph of the refinery's self reported HF emissions from 1987 to 2015, ranging from 0 lb. (2010) to 1,000 lb. per year since 1987, averaging 300 lb. per year for that time period.[vii, viii]

YEAR	**'87**	**'88**	**'89**	**'90**	**'91**	**'92**	**'93**	**'94**	**'95**	**'96**	**'97**	**'98**	**'99**	**'00**
LB.	1000	1500	250	250	380	385	350	350	410	410	430	310	620	130
YEAR	**'01**	**'02**	**'03**	**'04**	**'05**	**'06**	**'07**	**'08**	**'09**	**'11**	**'12**	**'13**	**'14**	**'15**
LB.	16	81	3	890	170	343	343	27	25	3	3	2	2	5

4. Fig. 5-13 Locations of nearby major sources of HF emissions, page 48 (PDF p. 57)



Ball Metal Beverage Container Corp. is noted to emit 0.010 – 62 lb. HF per year.

Torrance refinery emissions are *not noted* on this figure. They should be. The following is a graph showing the refinery's self reported HF emissions from 1987 to 2015, ranging from 0 lb. (2010) to 1,000 lb. per year since 1987, averaging 300 lb. per year for that time period.[ix, x]

YEAR	**'87**	**'88**	**'89**	**'90**	**'91**	**'92**	**'93**	**'94**	**'95**	**'96**	**'97**	**'98**	**'99**	**'00**
LB.	1000	1500	250	250	380	385	350	350	410	410	430	310	620	130
YEAR	**'01**	**'02**	**'03**	**'04**	**'05**	**'06**	**'07**	**'08**	**'09**	**'11**	**'12**	**'13**	**'14**	**'15**
LB.	16	81	3	890	170	343	343	27	25	3	3	2	2	5

5. Section 5.1.3 Torrance Refinery Emissions and Dispersion into Surrounding Communities, **Footnote 53,** page 51, (PDF p. 60)

> Although there are no hydrogen fluoride emissions from the refinery and the refinery has never had an off-site modified hydrogen fluoride release, a hypothetical emission was included in the modeling to inform placement of the fenceline monitors for purposes of this plan.

The refinery is arguing, prima facie, that no off-site HF release has occurred because no documentation is available.[xi] But such documentation *could not exist* due to the absence of fenceline monitors. It appears entirely possible, given the unit's proximity to Crenshaw, that HF has escaped the refinery grounds during larger releases, particularly in 1987, 1988, 1995 - 1997, 1999, and 2004 (graph, above), but those episodes went undetected by the public.

Until good fenceline monitors are in place with real time public monitoring, we simply cannot prove HF has exited the refinery grounds, unless a large release that persists were to occur.

MHF/HF should be monitored to detect any occasion in which it escapes the confines of the refinery. HF is an extremely dangerous chemical. Highly questionable claims are made for very low MHF volatility compared to HF (90% "credit" is taken on the EPA WC report). The community deserves the facts.

6. Table 6-4. OP-FTIR Detection limit specifications, page 90 (PDF p. 99)

The HF upper detection target is > 1,500 ppb. The bottom of this "upper" range is just 1.5 ppm, much too low. The device should be capable of detecting HF up to hundreds of parts per million. Otherwise we will not know how deadly the cloud was as it emerged.

7. Section 6.7.4 Hydrogen Fluoride, page 104 (PDF p. 113)

> "ToRC has a very robust existing hydrogen fluoride monitoring system around the alkylation unit… This will serve as the alternative hydrogen fluoride monitoring system for purposes of this Rule 1180 plan."

Although Rule 1180 allows air-monitoring systems to be "at ***or near*** the property boundary," in the case of HF it is essential that monitoring be conducted at the fenceline itself or immediately *outside*. The distinction is important. HF can travel for miles and the wind can blow in any direction. Therefore every refinery boundary (N, S, E, W) must have HF monitors providing full coverage so no HF plume can drift out undetected.

Fenceline monitoring is meant to grant communities the right to know which chemicals waft into their neighborhoods at which concentrations and with what frequency. As the EPA notes, such monitoring "ensure[s]… that neighboring communities are not being exposed to unintended emissions."[xii] ToRC's proposed use of the "existing HF monitoring system" does not meet that objective.

The current acceptable situation, in which there's no proof if an HF release escapes the refinery grounds, will continue and the spirit of Rule 1180 will be violated if SCAQMD accepts the alky unit's current HF monitoring system "as the alternative HF monitoring system for purposes of this Rule 1180 plan."

Furthermore, this would mean the responsibility and cost of documenting HF releases into the community would remain with the public, using monitors brought in from outside. Only these two refineries, out of ten in California, chose HF over sulfuric acid, acquiring a marginal profit advantage over those putting safety first. The two HF refineries should pay any and all costs associated with that choice.

---

[i] Consent Decree 1990-04-13, "Supplemental Responses of Defendants Mobil and Objections to the First Set of Interrogatories Propounded by Plaintiff," Case No. C719 953. "no trace of HF has ever been detected outside the refinery boundaries…"

[ii] EPA Facility Profile Report, 2014, EXXONMOBIL OIL CORP - TORRANCE REFINERY, Reported TRI Chemical Data, Releases-Trends Report. Acquired by the author from the City of Torrance through a public records request. <http://iaspub.epa.gov/triexplorer/release_fac_profile?tri=90509MBLLC3700W&TRILIB=TRIQ1&FLD=&FLD=RE_TOLBY&FLD=RE_TOLBY&OFFDISPD=&OTHDISPD=&ONDISPD=&OTHOFFD=&year=2011>

[iii] "Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks." SCAQMD, 2011-08-23, AB 2588 Air Toxics "Hot Spots" Health Risk Assessment Revision, ExxonMobil Torrance Refinery. <http://bit.ly/2lDmmHu>.<http://www.aqmd.gov/docs/default-source/compliance/ExxonMobil/exxonmobil-ab2588-hot-spots-health-risk-assessment-revision.pdf?sfvrsn=8>.

[iv] 2015-08-24, "The 6 EPA-Suggested Fenceline Monitoring Methods for Petroleum Refineries," Grant T. Aguinaldo, <https://www.enveraconsulting.com/petroleum-refinery-fenceline-monitoring/>.

[v] EPA Facility Profile Report, 2014, EXXONMOBIL OIL CORP - TORRANCE REFINERY, Reported TRI Chemical Data, Releases-Trends Report. Acquired by the author from the City of Torrance through a public records request. <http://iaspub.epa.gov/triexplorer/release_fac_profile?tri=90509MBLLC3700W&TRILIB=TRIQ1&FLD=&FLD=RE_TOLBY&FLD=RE_TOLBY&OFFDISPD=&OTHDISPD=&ONDISPD=&OTHOFFD=&year=2011>

[vi] "Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks." SCAQMD, 2011-08-23, AB 2588 Air Toxics "Hot Spots" Health Risk Assessment Revision, ExxonMobil Torrance Refinery. <http://bit.ly/2lDmmHu>.<http://www.aqmd.gov/docs/default-source/compliance/ExxonMobil/exxonmobil-ab2588-hot-spots-health-risk-assessment-revision.pdf?sfvrsn=8>.

[vii] EPA Facility Profile Report, 2014, EXXONMOBIL OIL CORP - TORRANCE REFINERY, Reported TRI Chemical Data, Releases-Trends Report. Acquired by the author from the City of Torrance through a public records request. <http://iaspub.epa.gov/triexplorer/release_fac_profile?tri=90509MBLLC3700W&TRILIB=TRIQ1&FLD=&FLD=RE_TOLBY&FLD=RE_TOLBY&OFFDISPD=&OTHDISPD=&ONDISPD=&OTHOFFD=&year=2011>

[viii] "Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks." SCAQMD, 2011-08-23, AB 2588 Air Toxics "Hot Spots" Health Risk Assessment Revision, ExxonMobil Torrance Refinery. <http://bit.ly/2lDmmHu>.<http://www.aqmd.gov/docs/default-source/compliance/ExxonMobil/exxonmobil-ab2588-hot-spots-health-risk-assessment-revision.pdf?sfvrsn=8>.

[ix] EPA Facility Profile Report, 2014, EXXONMOBIL OIL CORP - TORRANCE REFINERY, Reported TRI Chemical Data, Releases-Trends Report. Acquired by the author from the City of Torrance through a public records request. <http://iaspub.epa.gov/triexplorer/release_fac_profile?tri=90509MBLLC3700W&TRILIB=TRIQ1&FLD=&FLD=RE_TOLBY&FLD=RE_TOLBY&OFFDISPD=&OTHDISPD=&ONDISPD=&OTHOFFD=&year=2011>

[x] "Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks." SCAQMD, 2011-08-23, AB 2588 Air Toxics "Hot Spots" Health Risk Assessment Revision, ExxonMobil Torrance Refinery. <http://bit.ly/2lDmmHu>.<http://www.aqmd.gov/docs/default-source/compliance/ExxonMobil/exxonmobil-ab2588-hot-spots-health-risk-assessment-revision.pdf?sfvrsn=8>.

[xi] Consent Decree 1990-04-13, "Supplemental Responses of Defendants Mobil and Objections to the First Set of Interrogatories Propounded by Plaintiff," Case No. C719 953. "no trace of HF has ever been detected outside the refinery boundaries…"

[xii] 2015-08-24, "The 6 EPA-Suggested Fenceline Monitoring Methods for Petroleum Refineries," Grant T. Aguinaldo, <https://www.enveraconsulting.com/petroleum-refinery-fenceline-monitoring/>.

Olga Pikelnaya

From: Clifford Heise <clifheis@pacbell.net>
Sent: Thursday, January 10, 2019 4:39 PM
To: Rule 1180
Subject: Fence-line monitoring

January 10, 2019

Dr. Andrea Polidori

Atmospheric Measurements Manager

South Coast Air Quality District

21865 Copley Drive

Diamond Bar, CA 91765

Delivered via Email: Rule1180@aqmd.gov

Re: Torrance Refinery Rule 1180 Draft Plan for Air Monitoring

We have the following concerns regarding the Torrance Refinery Rule 1180 Draft Plan for Air Monitoring in Torrance, CA.

Page 104/105:

"TORC has a very robust existing hydrogen fluoride monitoring system around the alkylation unit, which is only unit that uses modified hydrogen fluoride (MHF)

inside the refinery, to detect any potential unplanned releases. This will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 Plan."

COMMENT: Fence-line monitoring for HF/MHF must be a part of the Air Monitoring Plan for Rule 1180. Failure and/or poor maintenance of mitigation equipment could result

in a wide-spread release of HF that has the potential to move past the fence-line and into the community. There have been on-site releases of MHF in the past at

Torrance Refinery, near misses of a catastrophic nature at the Torrance Refinery and large-scale releases which resulted in off-site consequences elsewhere.

Without fence-line monitoring to give the community data on the chemical's path of travel the "no off-site consequences" statement cannot be proven.

If HF reaches the fence-line it would be imperative to understand the concentration, speed and direction of the chemical to relay information to emergency personnel

to aid in community alerts and emergency response. Potential HF release does not only come from the alkylation unit, but also from truck transport and transfer

operations. In fact, there was an accidental release of 42 pounds of MHF just 2 weeks ago at the Torrance Refinery “while off loading MHF from a tanker truck to

a fixed tank the material leaked out of a 1 inch vapor recovery line” as reported on the Governor’s Office of Emergency Services Hazardous Materials Spill Report December 22nd, 2018.

As long as HF/ MHF is in use and/or stored at Torrance Refinery it must be included in the fence-line monitoring plan. The fence line monitoring must be made public.

Cliff and Donna Heise

Just a few blocks from Torrance Refinery.

Olga Pikelnaya

From: Frances Harder <frances@fashionforprofit.com>
Sent: Thursday, January 10, 2019 5:43 PM
To: Rule 1180
Cc: helmut.h@cox.net
Subject: Refinery

Subject: Rule 1180 at the Torrance Refinery
As a South Bay resident I am alarmed to learn that on page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/ HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Thank you.
Frances Harder

Sent from Mail for Windows 10

Olga Pikelnaya

From:
Sent: Thursday, January 10, 2019 6:05 PM
To: Rule 1180
Subject: Torrance Refinery Rule 1180 Draft Plan for Air Monitoring

To whom it may concern,

Fence-line monitoring for HF/MHF must be a part of the Air Monitoring Plan for Rule 1180. Failure and/or poor maintenance of mitigation equipment could result in a wide-spread release of HF that has the potential to move past the fence-line and into the community. There have been on-site releases of MHF in the past at Torrance Refinery, near misses of a catastrophic nature at the Torrance Refinery and large-scale releases which resulted in off-site consequences elsewhere. Without fence-line monitoring to give the community data on the chemical's path of travel the "no off-site consequences" statement cannot be proven.

If HF reaches the fence-line it would be imperative to understand the concentration, speed and direction of the chemical to relay information to emergency personnel to aid in evacuation, community alerts and emergency response. Potential HF release does not only come from the alkylation unit, but also from truck transport and transfer operations. In fact, there was an accidental release of 42 lbs of MHF just 2 weeks ago at the Torrance Refinery "while off loading MHF from a tanker truck to a fixed tank the material leaked out of a 1 inch vapor recovery line" as reported on the Governor's Office of Emergency Services Hazardous Materials Spill Report December 22nd, 2018.

As long as HF/ MHF is in use and/or stored at Torrance Refinery it must be included in the fence-line monitoring plan

The statement that MHF/HF *"is carefully controlled and monitored to prevent any unplanned releases to the atmosphere"* is an opinion of TORC that is not factual and needs to be stricken from the Plan language. Contrary to TORC's opinion, there is solid

data proving otherwise, including accidental releases of MHF/HF at the Torrance Refinery every year but one from 1987 to 2015 with a total reported release amount of 8,688 lbs for that period of time. Furthermore, as reported on the Governor's OES spill report there was an MHF release of 42 lbs at the Torrance Refinery on December 22nd, 2018.

Please strike the sentence "*Hydrofluoric Acid is used for industrial purposes like glass etching, metal cleaning and rust removal, some of which are used at refineries.*" as the small quantities used in glass etching, metal cleaning and rust removal are inconsequential in comparison with the mass quantities of HF used and stored at TORC. The sentence has no relevance beyond an attempt to downplay its safety.

Please include HF emissions from TORC in the figure. Once a gas is released, ruling out off-site path of travel is inaccurate and misleading unless multiple monitors off-site and on the fence-line can prove no off-site HF detection. Substantiate the claim that Ball Metal Beverage Container Corp. is a "major source" of HF emissions with references and timetables of release, otherwise strike from the document.

There have been multiple MHF releases on-site in the past at the Torrance Refinery as well as a nearly catastrophic "near miss" on a tank containing 50,000 lbs of MHF on February 18th, 2015 as described by the Chemical Safety Board. There was also an accidental release of MHF at the Torrance Refinery 2 weeks ago consisting of approximately 42 lbs of MHF. Furthermore, "refinery has never had an off-site modified hydrogen fluoride release" is inaccurate. Off-site and fence-line detection ability was not in-place at the time of on-site HF releases and therefore the statement cannot be substantiated. The statement in footnote 53 is misleading and should be stricken from the document.

Per Rule 1180 section (d) (2) (E), "procedures for implementing quality assurance by a qualified independent party…" must be included in the fence-line air monitoring plan. The statement above does not identify and provide a "qualified independent party" which is of great importance to the community.

We appreciate AQMD's due diligence in review and implementation of these matters.

Sincerely,
and the Torrance Refinery Action Alliance (TRAA)

Olga Pikelnaya

From: Anne Schmid <anneschmid@verizon.net>
Sent: Friday, January 11, 2019 8:30 AM
To: Rule 1180
Cc: anneschmid@verizon.net
Subject: Subject: Rule 1180 at the Torrance Refinery

As a South Bay resident I am alarmed to learn that on page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/ HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Thank you,
Anne Schmid

Olga Pikelnaya

From: Sherry Lear <slearattorney@gmail.com>
Sent: Friday, January 11, 2019 9:45 AM
To: Andrea Polidori; Rule 1180
Cc: Mike Busman
Subject: Public Comments Offered under Rule 1180 by 350 South Bay Los Angeles
Attachments: public comment Rule 1180 by 350SouthBayLA.pdf

Dear Dr. Polidori:
Attached please find public comments offered by 350 South Bay Los Angeles in relation to submitted monitoring plans under Rule 1180.
Please confirm receipt and let us know if you have any questions.
Sherry Lear
Co-Chair
350 South Bay Los Angeles

--
Sherry Anne Lear
Attorney At Law
3828 Carson Street, Suite 100
Torrance, CA 90503
(310) 303-7950
Fax: (310) 316-0324

350 SOUTH BAY LOS ANGELES

Dr. Andrea Polidori
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
Email: apolidori@aqmd.gov

Re: Public Comments on Rule 1180 Draft Plans for Refinery Monitoring

Dear Dr. Polidori:

As a matter of introduction, 350 South Bay Los Angeles (fka South Bay 350 Climate Action Group) is the oldest 350.org affiliated group in California, having formed in 2009. We derive our membership from the South Bay and Los Angles Harbor areas, from the affluent Beach Cities down to San Pedro and Wilmington. As home to 6 refineries, the Port of Los Angeles, LAX, and multiple freeways, our communities suffer from some of the worst air quality in the United States.

We are grateful for the implementation of Rule 1180, which has been a long-time coming for our overburdened frontline communities in the Southern California area. We expect that real-time monitoring reported on line and not only accessible but in a format understandable to members of the general public will confirm what those of us living in the shadows of refineries already believe: that dangerous emissions from such infrastructure is far more frequent than the refineries would themselves voluntarily report. With this in mind, we are philosophically opposed to the idea that the refineries who are to be monitored were tasked with drafting the monitoring plans that they must adhere to.

In addition, we find that the public comment period was inadequate in several respects. First, it was done without the benefit of public workshops within our frontline communities and offered in multiple languages, which would help members of the public understand the plans and better be able to offer meaningful comments for needed improvement. Second, the public comment period, even after extension, was not long enough given the multiple documents that need review, their technical nature and the sheer volume. Finally, it is unclear whether, or how, the SCAQMD will utilize the input from these comments as the website simply indicates that proposed plans will be approved or disapproved. If this is to be truly democratic process with meaningful public oversight, then public comments should not be simply perfunctory and the public should be allowed participation and approval as to the plans being offered.

As our group is made up entirely of volunteers with lay backgrounds, we offer public comments on three of the proposed plans. We do expect that a number of our

comments will apply to other plans than those specified and ask the SCAQMD staff to take this into account.

Before addressing specific plans; however, we address the requirement that the data collected from fence-line monitoring be reported in real time to members of the general public. The plans proposed indicate that each refinery will be responsible to create and maintain its own website for reporting on data collected. We have several concerns with this concept.

First, we are concerned with the reliance on websites as a single source of reporting. Obviously, a web-based system to disseminate monitoring system data would only be available to residents with computers or smart phones. There needs to be reporting available on multiple platforms including smart phone applications and social media sites as well as placement of monitors with reporting information within several public locations such as municipal buildings (which notably have limited hours), shopping malls, schools and the like.

Second, it is imperative that there be a single website/app/etc. where members of the general public can go to get information on **any of the refineries** that are subject to Rule 1180. Of note, the California Air Resources Board presently has first-page links to Real-Time Refinery Fenceline and Community Monitoring Data for three refineries. The SCAQMD needs to implement the same for our local communities.

The data reporting systems need to be user-friendly and easy to understand. Each chemical or compound needs to be listed out separately with current reporting along with a color-coded indication as to where the emissions reported fall, using the traditional format of green-yellow-red and adding black for catastrophic or particular dangerous emission levels. We refer the SCAQMD to the reporting sites for Phillips 66 Rodeo Refinery (which has color coding) and the Richmond Community Air Monitoring Program for the Richmond Refinery (which lists out each monitored chemical and compound with links to describe the compound as well as expected effects from short and long term exposure.)

Above all, the information reported needs to be understandable. With the monitoring plans that were provided, the example screenshots for website data could be to complex or confusing to average residents. There also needs to be clear instructions offered as to safety measure that the public can take in the event of dangerous levels of emissions including soft and hard shelter-in-place and evacuation and clear notification when such safety measures are being implemented.

Ideally, the websites should be consistent in look and feel as well as the information presented and the method of presentation. The three websites now linked to the California ARB are each quite different.

The data needs to be shared in multiple languages with English and Spanish being a minimum requirement. There are multiple other languages spoken by residents in Los

Angeles County and the translation requirement should reflect what is required under 2018 Election Language Assistance Requirements of the California Secretary of State. In Los Angeles County this would include: English, Spanish, Tagalog, Chinese, Japanese, Korean, Armenian, Cambodian, Vietnamese, Bengali and Farsi, without even taking into account different dialects.

Any website or platform used needs to offer residents the ability to subscribe to email notifications of when thresholds are exceeded, instrument outages, or new reports. However, in the case where thresholds are exceeded, email may not be timely enough. The public should be offered ability to opt-in to text, phone, and email notification provided in real-time and in different languages as noted.

With such parameters in mind, we address the individual monitoring plans that we have been able to review in the time period provided:

Torrance Refinery

We concur with the public comments offered by the Torrance Refinery Action Alliance concerning the utter failure of the plan to include any proposed monitoring for hydrogen fluoride or modified hydrogen fluoride. The dangers of this chemical compound are well-known to the SCAQMD and the entire South Bay community and it would be grossly negligent to exclude HF/MHF from the fence-line monitoring plan. The fact that the Torrance Refinery Company considers it appropriate to exclude HF/MHF from the list of chemicals to be monitored only underscores the problem with allowing the refinery to draft its own plan.

Additional comments are as follows:

1) Footnote 9, page 11 claims no estimated emissions of hydrogen fluoride. This should actually refer to MHF. Moreover, the claim that are no “estimated” emissions because the HF/MHF process use is a closed loop is of no consequence. If the systems in place experience failure, big or small, then the resulting emissions must be monitored so that appropriate safety measures can be implemented in a timely manner.

2) The areas surrounding the refinery can be characterized as a blend of heavy and light industrial, commercial, medium and high-density residential and industrial/manufacturing. Some residential areas are quite close to the refinery including sensitive locations such as schools and parks.

3) Communities to the east and northeast are typically downwind of Torrance refinery operations, however, winds have been recorded in all directions. Thus, communities to the north and south can be downwind of the refinery at times. There was an a-typical wind patter at the time of the 2015 explosion which resulted in accumulations of catalyst dust going as far as Redondo Beach.

4) The plan discusses air quality at SCAQMD monitoring stations near LAX and in Long Beach and states that pollutant levels were below or in compliance with state and

Federal ambient air quality standards. It is erroneous to project air quality measurements at these monitoring stations to the Torrance Refinery.

5) Fixed point and open path monitors are proposed to be installed at approximately 500-meter intervals along the fence line and will have the ability to rotate at 5-minute intervals to enable monitoring of 1000 meters per monitor. This appears to be a means to "cheapen" the cost of the installation. It would seem that the rotational ability would add to the cost and complexity of ongoing maintenance. Additionally, 350 South Bay Los Angeles lacks qualifications to comment if the interval spacing is adequate or not and we believe that the SCAQMD staff should address this issue or retain an independent review of the same.

6) The plan notes several areas with gaps along the fence line monitoring but states that it is not believed these will compromise the quality or reliability of the proposed air monitoring system. We are unable to comment if this assumption is correct or not but this allegation does raise concern given the history of incidents at this aging refinery. We again note the proximity of this refinery to residential and other highly sensitive areas.

7) The plan devotes considerable text to discussing known drawbacks of monitoring technologies. We are unable to comment if this discussion is valid or accurate but agree that any monitoring plan should require a refinery to install and maintain the best available technology and to upgrade the system as improvements become available.

8) Suppliers of monitors and analyzers are not specified as the plan discusses the refinery will have the flexibility to obtain competitive bids during implementation. Again, the refinery should be required to obtain best available technology, as determined by expert analysis and/or SCAQMD staff, versus being able to opt for lower-cost equipment.

9) 20 monitoring and analyzer systems are proposed to be installed to cover the entire fence line of the refinery. We are unable to comment if this is sufficient and would request that the SCAQMD employ independent analysis to make this determination and advise the public accordingly.

10) Alternative/backup up monitoring systems for use when the continuous monitoring systems are offline for extended periods for maintenance or repair are being evaluated but will not be selected until the implementation phase. It would appear that the Torrance Refinery wants to be able to choose and install such important backup equipment at its discretion. This should be subject to approval of appropriate SCAQMD staff.

11) Data presentation to the public. Please see our introductory comments.

a) A web-based system to disseminate monitoring system data are proposed. This would only be available to residents with computers. Example screenshots could be too complex or confusing to average

residents, especially non-native English speakers. The system implemented must be user friendly, understandable by members of the general public and offered on several platforms to ensure the widest possible reach including social media, smart phone applications, as well as on-line.

b) Automated QA checks on data recorded to determine validity. Criteria values will not be developed until system commissioning.
c) The proposed website will offer residents the ability to subscribe to email notifications of thresholds exceeded, instrument outages, or new reports. However, in the case where thresholds are exceeded, email may not be timely enough. The public should be offered ability to opt-in to text, phone, and email notification provided in real-time.
d) There does not appear to be any provision for text notifications or public displays for residents without Internet access or in strategic locations, such as shopping centers, libraries, public buildings (City Hall) etc.
e) All of the above leaves room for lack of SCAQMD review/control.

12) Quality Assurance Project Plan is only a draft plan and does not include manufacturer specific operating procedures or any preventive maintenance activities. The plan will only be finalized during implementation. This leaves room for lack of SCAQMD review/control.

13) Discussion of rail network, major roads & freeways, chemical plants, other refinery operations, fuel distribution terminals, tank farms, other commercial and industrial facilities in vicinity noted. There is no discussion of how to "filter out" pollutants from these sources from fence line monitored data, nor is there any discussion of dangerous imposed by mixing of chemicals and pollutants from these different sources.

Tesoro Carson and Wilmington Refineries

1) The plan calls for the final Operations & Maintenance (O&M) requirements to be determined after instruments are procured. This allows for lack of SCAQMD review/control, which is not acceptable.

2) The final design for the web-based system to disseminate information is to be created only after plan approval and during implementation. Again leaves room for lack of SCAQMD review/control. There should be a series of required guidelines for the web systems set by the SCAQMD. Ideally, there would be a single web-based system used for reporting emissions for all refineries, rather than multiple systems which force members of the public to use different sources to get information. As noted for the Torrance Refinery plan, there should be multiple platforms for such information to be made available.

3) The final design for the public notification system is to be created after plan approval and during implementation. This again leaves room for lack of SCAQMD review/control. Notification systems need to have multiple platforms and also be consistent across the region, especially since there refineries concentrated in the Los Angeles Harbor (Wilmington/Carson) area.

4) The contractor for independent oversight is to be selected after plan approval. The options should be limited to a list of approved SCAQMD contractors or otherwise subject to SCAQMD approval.

5) There is a 900 to 1500 feet distance from the facility to residential areas noted in plan. Real-time monitoring in such sensitive areas is critical, especially in light of the fact that the State of California lacks any state-wide setback regulations concerning such operations and the City of Los Angeles is unable to impose setbacks on refinery operations within city limits.

6) Consideration of corridor rail network, major roads and freeways, multiple chemical plants, other refinery operations, fuel distribution terminals, asphalt plant, tank farms, other commercial and industrial facilities in the vicinity is noted. There is no discussion of how to "filter out" pollutants from these sources from fence line monitored data or how combination of pollutants with refinery emissions may create additional concerns or hazards.

7) 350 South Bay Los Angeles is unable to comment on quantity or placement of sensors as well as maintenance activities or schedule. The sensor types noted appear to follow Rule 1180 guidelines.

8) The plan notes that several paths cannot be extended due to buildings, other obstructions, parking, utilities, and roadways. We are unable to comment if alternatives or other discussion will meet requirements of Rule 1180 guidelines and request that the SCAQMD consider the same.

9) Quality Assurance plan to check and review data range, sticking, rate of change, missing data, sensor codes and alarms appears to be reasonable but we do note that the external QA review by a third party will be determined at a later date. 350SBLA is unable to comment on the +/- % for acceptance criteria adequacy.

10) Data presentation to the public via a public facing website in English and Spanish. There are other languages, notably Tagalog, spoken among community members, which should be considered. Please see comments above regarding our suggestion for language requirements. The example for data presentation shown could be confusing to members of the general public. Additionally, residents in these areas might not have access to a computer and there should be multiple platforms available for review of data including smart phone applications, social media and the like as well as placement of monitoring information within public locations.

11) Notification System – “Tesoro will develop an air quality notification system”, but little detail is given on how notifications will be communicated. A monitoring plan without a multi-level notification plan is entirely inadequate.

Phillips 66 Wilmington Refinery

1) Section 1 Technology Descriptions

- The use of multi-path UV DOAS analyzers is discussed. These systems use auto-positioning systems to target multiple reflectors. We have a concern that these will be used to “cheapen” the fence line monitoring system and the electrical-mechanical components of the positioning systems will be more susceptible to increased maintenance and failure.
- A mobile backup air monitoring system is discussed and “will be deployed in the event the main fence line system goes offline for longer than 24 hours. The system will be used when there is an equipment breakdown, power outages, weather events, and other unplanned scenarios.” The discussion does not clarify if this will be used for temporary measurement during equipment failure, routine, or extended maintenance.

2) Section 2 – Evaluation of Emission Sources and Community Impact

- Downwind impact on local communities was evaluated using a dispersion model using wind and other weather data from the Long Beach Airport. We believe that weather data from a meteorological station closer to the refinery would be more relevant and less subject to inaccurate output results that could affect the design of the monitoring system.
- Several of the pollutants included in the dispersion model have emissions exceeding 5,000 pounds/year and most present a specific health risk. Because of this, we believe that the design of the fence line monitoring system must be robust as well as the Quality Assurance Project Plan and notification systems.
- Maximum hourly and annual average concentrations of the various pollutants are shown by the model to extend into residential areas near the refinery, necessitating strict adherence with the Rule 1180 guidelines.

3) Section 3 - Proposed Site Locations for Fence-line Monitoring Systems

- Figure 3.1 - Map of Fence-Line monitoring shows black carbon and H2S monitors at the southeast corner of the refinery. No open path monitors are shown along the southeast fence line between paths 2A and 4B.

Three black carbon and H2S monitors are shown with no monitor at the northwest corner of the refinery. We are unable to comment if the quantities and locations of monitors are sufficient and ask for the SCAQMD staff to consider the adequacy of the plan to monitor these dangerous compounds.

4) Section 4– Data Presentation to the Public

- "All air monitoring equipment specified for the Phillips 66 fence-line system will collect data on five-minute averages and be transmitted to an Internet website where the real-time results can be viewed by the public." Although the website will be in English and Spanish (please see introductory comments concerning multiple language), there is no mention of other means (such as public message kiosks in strategic locations in the surrounding communities) to communicate the data and reports to residents who do not have access to a computer. As we have already noted, all monitoring plans should be multi-level and include smart phone apps as well as social media applications. The plan is silent on other means to provide notifications to the public such as telephone, text messages, or email.

5) Section 5 – Data Management

- "The entire fence-line monitoring system is continually monitored for system performance. This includes the instruments, workstations, and Internet communication hardware. If at any time an element of the system fails to meet performance criteria, a message is generated to key personnel at P66 and the Contractor who will begin activities to correct the problem. If an issue cannot be immediately corrected, the real-time website will be updated with a notification explaining the problem and the corrective action activities." We have two concerns here. First, the Contractor servicing the system is not identified. Second, if there is a problem such as high pollutant detection, residents without computer access to the website will not be notified.

6) Section – 6 Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOPs)

- "The QAPP and SOPs will be submitted for review and approval by SCAQMD **when the final equipment is selected** for the fence-line program." We believe that the QAPP and SOPs should have been

detailed in the fence line monitoring plan submittal and should include items such as routine maintenance tasks and frequencies, calibration checks, training, etc.

Thank you for your consideration on these matters.

Sincerely,

Sherry Lear, Co-Chair 350 South Bay Los Angeles

Michael Busman, 350 South Bay Los Angeles

Olga Pikelnaya

From: Bruce Heyman <Director@lamitopsail.org>
Sent: Friday, January 11, 2019 9:55 AM
To: Rule 1180
Subject: Los Angeles Maritime Institute Comments on Rule 1180 - Tesoro/Marathon Los Angeles Refinery Plan
Attachments: LAMI Input Rule 1180 2019.1.11.pdf

Hello,
Please find attached our comments.
Respectfully,
Bruce

--
Captain Bruce Heyman
Executive Director
Los Angeles Maritime Institute (LAMI)
TopSail Youth Program
Celebrating our 26th year!
Berth 73, Suite 2 | San Pedro, CA 90731
T 310.833.6055 | **C** 949.289.8400
F 310.548.2055 | **W** www.lamitopsail.org

Los Angeles Maritime Institute
Berth 73, Suite 2, San Pedro, CA 90731
310.833.6055 | info@lamitopsail.org | www.lamitopsail.org

January 9th, 2019

South Coast Air Quality Management District
21865 Copley Dr
Diamond Bar, CA 91765

Dear SCAQMD,

Thank you for the opportunity to comment on the Tesoro/Marathon Los Angeles Refinery plan that has been submitted by our area refineries. We believe the drafts conform to the intent of Rule 1180, Refinery Community Air Monitoring Plans that were made available on December 10, 2018 and encourage it's adoption. Thank you for the time extension to January 11, 2019 allowing us to get through the holiday season.

I have been the Executive Director of the Los Angeles Maritime Institute, LAMI, for just over five years and during that time I have worked and lived in the Harbor area affected by this study. During my time in this role I have found Tesoro (Marathon) to be an excellent partner focused on bettering the lives of all involved in the communities they live and work. As a 27 year non-profit LAMI counts on the community to deliver our mission which is focused on improving the lives of youth that are the most economically and educationally disadvantaged. For this reason and others articulated below, I enthusiastically support the Draft Plan submitted by the joint Tesoro Carson/Wilmington Refineries.

LAMI makes extensive use of volunteers and relatively low wage earners to staff our vessels and operations. Thus most of our folks live a considerable distance from our Port of Los Angeles waterfront location and hence they all depend heavily on the fuels that they need for their commutes. The vast majority of our student's (middle and high school) parents depend on employers, like Marathon, to provide the solid and high paying jobs along with the economic vitality that is required to support the community.

We realize that this, along with all of the industries in the port complex creates a tension between economic vitality and environmental impacts. I've been impressed with Marathon's, and others in the port complex, success and focused efforts to reduce all of the environmental impacts. Further I believe the plan as submitted will provide so much more detailed data allowing much more effective action plans to be developed and executed. From my almost three decades in the high tech/manufacturing industry I've become a firm believer in the statement: "if you measure it, it will get better", it is human nature to do so.

From my time in the harbor area and my constant movements around the harbor I believe it will be very useful to have hard measurement data in near real time to help us to better understand and apportion the various emissions to other localized sources. It will also help us identify what constituents are being emitted by the facility, what areas adjacent to the facility are most susceptible to these

Los Angeles Maritime Institute
Berth 73, Suite 2, San Pedro, CA 90731
310.833.6055 | info@lamitopsail.org | www.lamitopsail.org

emissions such as the schools and students that we serve, what the procedures are for notifying potentially impacted parties, and longer-term solutions for minimizing these impacts.

Specifically, we believe this proposed plan addresses:

1. Complete inclusion of environmental factors like prevailing wind speed and direction allowing determination of areas proximate to the facility that would most likely be impacted by offsite emissions.
2. An analysis of key facility operations and historical emissions data.
3. The types and placement of air monitoring equipment to best detect any emissions that could have offsite impacts.
4. A rigorous and complete inventory of particularly sensitive receptors such as schools, day care, elderly and medical facilities along with a process for advising these more sensitive populations.
5. A wider process for providing near real time emissions data of constituent levels to the general public and to the District.

As original calendar for this rule had the comment period wrapping up in November 2018 we hope this submittal will be approved quickly. The Tesoro/Marathon Los Angeles Refinery plan addresses the requirements of the District's Rule 1180 and I encourage approval of the Plan so that the next phases of the Rule can be promptly developed, implemented and executed.

Respectfully,

Bruce Heyman
Executive Director

Olga Pikelnaya

From: Florence Gharibian <florencegharibian@yahoo.com>
Sent: Friday, January 11, 2019 12:35 PM
To: Olga Pikelnaya
Subject: Fence Line Monitoring Comments
Attachments: fenceline monitoring comments.docx

Please accept the attached comments.

Thank you

Florence Gharibian
florencegharibian@yahoo.com

Comments on Refinery 1180 Plans

COMMENT ONE; SCAQMD ROLE IN FENCELINE MONITORING RULE

During the busy December holiday time the SCAQMD released several fence line monitoring plans prepared by contractors for Los Angeles refineries for a two week public comment period. SCAQMD Information accompanying the plans includes a schedule including a two week public comment period in the last two weeks of December and implies that this was a reasonable and pre-determined step. Unfortunately, several environmental organizations did not find the two week public comment period reasonable or appropriate.

Refinery fence line monitoring is of vital importance. **Done correctly the use of new air monitoring methods and equipment will provide real time data that will result in air pollution reductions at the refineries. The rule also calls for enhancing community understanding of the impact of air emissions from refineries on their health and welfare. More effective emergency response when emergencies occur is also possible.**

Implementation of Rule 1180 will depend on effective communication with the people living and working near the refineries. The SCAQMD must take an active role in making this happen. Relying on several refineries to design and implement information programs for the communities located near the refineries is unrealistic. The SCAQMD has a major role in insuring community residents have a maximum opportunity to understand how air pollution from the refineries impact their health. How will the SCAQMD insure that the real time data is accurate and understandable? **Is the SCAQMD working with local emergency response personnel to insure that if an accident at one of the refineries impacts adjacent communities the right steps will be taken to respond to that emergency?** Participating in the 1410 work group causes grave concern regarding emergency response to an accidental release of one or more dangerous chemicals currently being used at the refineries. Response to an accident at the refineries will not be adequate and public health will be impacted in part due to inadequate planning and coordination.

The SCAQMD must take a role in coordinating with all the refineries to develop communication programs that work. This goal will be a difficult task. Time and effort must be committed to make this happen.

Apparently, the schedule for Rule 1189 was developed before the plans were developed
and submitted. The schedule may have been accepted by members of an 1180 work group but not the larger public the SCAQMD serves.

My many years of experience working with the public and attempting to communicate effectively complex technical information have taught me that earnest community involvement is difficult. Expecting all of the refineries located in the Los Angeles area to develop effective real time community information systems and anticipating those systems will result in well informed communities with a capacity to understand and respond to the information they are receiving is not realistic.

COMMENT TWO: ARE THE REFINERY FENCELINE MONITORING PLANS FINAL?

In early December 2018 several fence line monitoring plans were submitted in to the SCAQMD. Has SCAQMD staff reviewed and approved all these plans? Will the SCAQMD negotiate with the refineries to develop further modifications to the plans? This is an important consideration because if the SCAQMD allows modifications to the plans that reduce fence line monitoring requirements as a result of negotiations with the refineries the public may or may not know about these changes. If the SCAQMD accepts the plans without review this is also unacceptable.

Normally when I prepare comments on an SCAQMD rule or plan I feel an obligation to do my homework, to make my comments accurate and complete. Frankly this just isn't possible this time. I going to Colorado next week to visit and provide assistance to a dear friend involved in a serious car accident. However, even the extended time offered for review of the refinery documents won't be adequate for anyone to do the right level of review of all the documents.

Sincerely,

Florence Gharibian

Olga Pikelnaya

From: Marina Kennedy <marinakennedy@gmail.com>
Sent: Friday, January 11, 2019 1:12 PM
To: Rule 1180
Subject: Rule 1180 at the Torrance Refinery

As a South Bay resident I am alarmed to learn that on page 104/105 of the Torrance Refinery's proposed plan, they suggest that the new fence-line monitoring system should not include MHF/ HF and that their "existing hydrogen fluoride monitoring system...will serve as the alternative hydrogen fluoride monitoring system for the purposes of the Rule 1180 plan.". This is outrageous and completely unacceptable because it totally ignores a major public health and public safety risk.

There have been on-site releases of MHF in the past and without fence-line monitoring to give the community data on this highly toxic chemical's path of travel the "no off-site release" statement can not be proven. Therefore, as long as HF/ MHF is in use at the Torrance Refinery it must be included in the fence-line monitoring plan and must be a part of the Air Monitoring Plan for Rule 1180.

Thank you.
Marina Kennedy

Olga Pikelnaya

From: Catherine Leys <catherine.b.leys@gmail.com>
Sent: Friday, January 11, 2019 2:40 PM
To: Andrea Polidori
Cc: Rule 1180; Catherine Leys
Subject: Rule 1180 comments: Families Lobbying Against Refinery Exposures

Dear Dr. Polidori,

I am a founder of South Bay Families Lobbying Against Refinery Exposures, also known as FLARE. We are a 2,500 person community group located in the South Bay who are concerned about harmful impacts of Torrance Refinery operations. We are grateful for the implementation of Rule 1180, which is long needed by frontline communities, who currently have no way of assessing air quality.

Please see the below comments and concerns regarding the current plan.

1. The requirements should include monitoring for hydrogen fluoride or modified hydrogen fluoride. Records submitted by TRAA indicate that HF has been released on certain occasions. A high risk chemical being used in close proximity to urban populations needs to be included in open path monitoring.
2. The plan currently uses websites as a single source of reporting. It would be preferable to provide information on multiple platforms including smart phones, social media, and on public media boards / bill boards, schools, community centers, etc., to maximize data access.
3. The data reporting systems would benefit from being color coded in a way that indicates where the emissions fall. Traditional format of green, yellow, red, black as used in the Phillips 66 Rodeo Refinery and the Richmond Community Air Monitoring Program.
4. The website should allow users to subscribe to email notifications when emission thresholds are exceeded, or there are instrument failures, power outages, planned flaring, or new reports.
5. Information reported needs to be understandable, coupled with clear instructions for general populations, sensitive populations, and medically fragile populations.
6. Website language should be offered in languages represented in the SCAQMD region.

Thank you for your time and consideration on these comments.

Catherine Leys
Families Lobbying Against Refinery Exposures

Olga Pikelnaya

From: Ashley Hernandez <ashley@cbecal.org>
Sent: Friday, January 11, 2019 4:08 PM
To: Rule 1180
Subject: Community comments 1180 fence line regulation
Attachments: SCAQMD fence line letter.pdf

Hello,

My name is Ashley and I am a Wilmington Resident, and organizer with Communities for a Better Environment. Above are a few letters made by few community members dealing with concerns with the finalizing of the regulation plan. We hope that concerns like these will be heard and that time for our impacted residents to not only understand, but offer feedback in this important process is addressed. We need real time to find real solutions for our problems in the frontline.

Best,
Ashley Hernandez

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Arturo Mares, and I live in Carson, CA. This letter is to express my disgust regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. I am extremely bothered because there is no logic behind allowing communities to monitor areas high on pollution yet fails to carry out the process. Monitoring air pollution plays a imperative role in the health impacts that affect not only frontline residents like myself, but our entire environment. Although we can't see emissions with the naked eye, studies tell us chemicals in my community are silent, invisible killers. Allow frontline residents enough time to participate in a process that can ultimately give us a better life.

Best,
Arturo

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Tammy A. Ramos and I live in Wilmington, Ca. This note is to express my concern regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. I am extremely bothered because I always experience heavy odors; and live near the biggest refinery in the West Coast and my health and my family's health is dealing with these impacts. Allow us to have enough time to intentionally support real, effective monitoring in our community.

Best,
Tammy A. Ramos

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Angelica Interiano and I live in Wilmington, CA. I am currently a senior at Phineas Banning High School.

I am writing this letter to express my disappointment regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. This lack of process belittles any concern my community and myself share when it come to protecting our homes. This action personally feels dehumanizing to me, and I am not ok with not fully being allowed the time to effectively participate in creating a strong regulation. It is your job to help our community, and protect our quality of life. I hope my to be able to participate and enlighten you all on my experiences with pollution.

Best,
Angelica Interiano

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Luis Martinez and I live in Wilmington, CA. This note is to express my lack of discontentment regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. I am extremely bothered because I live in a community that has the highest concentration of refineries in the state, and we were not given adequate time to participate intentionally. I hope that you all will create more time to have a real community process.

Best,

Luis Martinez

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My Name is Ashley Hernandez, and I live in Wilmington, CA. I am submitting this note to express my frustration regarding SCAQMD's lack of community process through fence line monitoring regulation. I am extremely annoyed that despite having the SCACMD holding meetings in our communities our concerns, as residents aren't being addressed. I am disappointed that participation in this process wasn't inclusive of the residents that need to hear what plan you have developed for their communities. We need SCAQMD to allow for a real public process to create an effective fence line monitoring regulation.

Best,
Ashley Hernandez

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Cynthia Bermudez, and I live in Wilmington, CA. This letter is to express my disgust regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. I am extremely bothered because this is was an opportunity for our community to remain engaged in the process of making our community healthier. You should allow our community the necessary time.

Sincerely,

Cynthia
Age 17

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Rosa Chun, and I live in Wilmington, CA. This letter is to express my disgust regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. I am extremely bothered because upset we weren't informed about this situation is an accessible way. This issue needs to be given adequate time to be addressed, and releasing this plan around the holidays made it far more difficult for us to be a part of giving comments.

Sincerely,

Rosa Chun
Age 17

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Tammy M. Ramos, and I live in Wilmington, CA. This letter is to express my disgust regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. I am extremely bothered because this information was released without or consideration of the community. We should be able to have enough time to review plan and offer comments.

Sincerely,

Tammy M. Ramos
Age 17

South Coast Air Quality Management District Attn:
Dr. Andrea Polidori,
Atmospheric Measurements Manager
21865 Copley Drive

Hello,

My name is Georgia Bernal, and I live in Wilmington, CA. This letter is to express my disgust regarding SCAQMD's lack of community process through finalizing the fence line monitoring regulation. I am extremely bothered because our health is real and intentionally silencing community due to lack of time feels dehumanizing.

Sincerely,
Georgia Bernal, Age 17

Olga Pikelnaya

From: Jesse Marquez <jnm4ej@yahoo.com>
Sent: Friday, January 11, 2019 5:13 PM
To: rule180@aqmd.gov; Andrea Polidori; Olga Pikelnaya
Cc: Jesse Marquez; Drew Wood; Ricardo Pulido; Jane Williams; Cynthia Babich; Robina Suwol; Anabell Romero; John Miller; Mitzi Shpak; Pastor Carrillo; Joe Gatlin; jweins113@hotmail.com; Ann Cantrell
Subject: CFASE et al Public Comments Submissions On 5 Draft Refinery Fenceline Air Monitoring Plans
Attachments: CFASE Final Public Comments - Chevron Refinery - Draft Refinery Fenceline Air Monitoring Plan 1-11-2019.docx; CFASE Final Public Comments - Phillips 66 Carson Refinery - Draft Refinery Fenceline Air Monitoring Plan 1-11-2019.docx; CFASE Final Public Comments - Phillips 66 Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan 1-11-2019.docx; CFASE Final Public Comments - Tesoro Carson Wilmington Refineries - Draft Refinery Fenceline Air Monitoring Plan 1-11-2019.docx; CFASE Final Public Comments - Torrance Refinery - Draft Refinery Fenceline Air Monitoring Plan 1-11-2019.docx

Respectfully Submitted,

Jesse N Marquez
Executive Director
Coalition For A Safe Environment
310-590-0177

Coalition For A Safe Environment
California Kids IAQ
Community Dreams
EMERGE
American Legion Post 6
Wilmington Improvement Network
San Pedro & Peninsula Homeowners Coalition
NAACP- San Pedro-Wilmington Branch # 1069
California Communities Against Toxics
Apostolic Faith Center
California Safe Schools
Del Amo Action Committee
Action Now
St. Philomena Social Justice Ministry
Citizens About Responsible Planning

January 11, 2019

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765
909-396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya
Program Supervisor
909-396-3157
opikelnaya@aqmd.gov

Rule1180@aqmd.gov

Re: Chevron Refinery - Draft Refinery Fenceline Air Monitoring Plan
Su: CFASE et al Public Comments Submission

Dear South Coast AQMD:

On behalf of the undersigned organizations we would like to submit our public comments on the Chevron Refinery - Draft Refinery Fenceline Air Monitoring Plan.

While we recognize that the plans were prepared in response with the South Coast AQMD (SCAQMD) Rule 1180 and AB 1647 we wish to state the following for the record:

1. It is our opinion that the Chevron Refinery - Draft Refinery Fenceline Air Monitoring Plan does not comply with Rule 1180, AB1647 and AB617.

2. We submit our public comments on this plan so as not to relinquish our rights and public comments regarding the inadequacies of the Draft Refinery Fenceline Air Monitoring Plan, Rule 1180 and Rule 1180 Fenceline Air Monitoring Guidelines.
3. That the SCAQMD did not adopt the majority of all requests and recommendations made by the Public, Disadvantaged Communities and Environmental Justice Communities regarding Rule 1180.
4. That the SCAQMD is aware of the adoption into law of AB617 which has additional legal requirements and will have new mandates for Fenceline Air Monitoring.
5. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent will during the AB617 Community Plan preparation, public meetings and public participation process will make new requests, recommendations and requirements that may exceed the SCAQMD Rule 1180.
6. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent formally request that the SCAQMD wait until the AB617 Community Plans have been completed so that all Fenceline Air Monitoring Requirements can be incorporated into the SCAQMD Rule 1180 Fenceline Air Monitoring Plans.
7. We request that the public have an opportunity to review and comment on the Final Plan.

CFASE et al Public Comments regarding compliance to the South Coast AMD - Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines, December 2017:

Key Objectives:

1. **Provide information about various air pollutant levels (i.e., determined by air pollutant concentration) measured in real-time in durations short enough to adequately address significant emissions changes from refinery operations;**

    a. The Draft Plan does not identify all types of refinery emissions categories and chemicals that are allowed such as in the SCAQMD issued Title V Permit and what is reported annually to SCAQMD and USEPA.
    b. The Draft Plan does not include current available refinery emissions data.
    c. Data should be reported at 5 minute and in real time, at 1 minute intervals to provide sufficient time for the community to respond and for the refinery to mitigate 10 minute emission concentrations in accordance to the Acute Exposure Guideline Level (AEGL) as specified in Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017. We are aware of at least one system that is capable of averaging, reporting, and displaying data, in multiple intervals, simultaneously.
    d. True Real time data should be uploaded at one-minute intervals.
    e. We want real time data and reporting every one-minute, displaying both one minute and 5 minute averages.
    f. The Draft Plan fails to disclose how total VOC's will be calculated. Most of the refinery emissions are alkanes, therefore, TVOC should be defined as total alkanes and should be measured, accurately, using the estimated molecular weight, presented in combination with the Total Alkanes concentrations in parts per billion, as described Method EPA/600/R-09/136, and in the EPA Guidance Document

Measurement of Emission from Produced Water Ponds, October, 2009, Appendix A. This will provide the most accurate measurement of release quantities

g. Real time, one-minute reporting to the public to provide critical alerts, preventing contaminants from entering the community in advance of reporting. For example, a wind speed of around 2m per second at time of an event, results in contaminated air reaching a distance of 120m. In 10min, that air will move a distance of 1,200m. With refineries located very close to densely populated areas, such risks and exposure to public health are not acceptable.
h. Shorter reporting intervals will minimize the possibility of data manipulation, unauthorized software program attribute changes, and inaccurate reporting to the public. All the reporting should be subject to spectral validation in real time to insure published data is accurate and precise as published. We are aware of at least one manufacturer whose monitoring equipment is capable of real time data collection, data analysis, quality control and reporting every one-minute

2. **Gather accurate air quality and meteorological data to identify both the time(s) and location(s) of various air pollutant levels near refinery operations and provide a comparison of these levels to other pollutant levels monitored in the Basin;**

a. The Draft Plan failed to acknowledge that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances, wider dispersion and at further distances at lower ground levels thus resulting in increased public health impacts and increased risk exposure.
b. The Draft Plan failed to acknowledge and address that Santa Ana Winds have a significant impact on refinery emissions dispersion.

3. **Track long-term air pollutant levels, variations, and trends over time at or near the property boundaries of petroleum refineries and in nearby communities;**

a. The Draft Plan fails to require true real-time monitoring 24/7/365. True Real time data should be uploaded and reported at one-minute intervals.
b. The Draft Plan fails to require Quality Control and QA of the true real-time monitoring, measurement, data collection and reporting 24/7/365.
c. The Draft Plan fails to include any criteria for system availability for a 24/7/365 operation. The proposed 75% Availability is unacceptable and appears that it could drop down to 50%, the public would be deprived of 3-6 months of data and information. We request a 90% availability uptime requirement. Availability will be calculated as the ratio between (100% absolute operation time, minus poor visibility conditions time, minus system idle time) divided by (100% absolute operation time). Availability criteria should be calculated and reported on a quarterly basis for every fenceline system. Availability should be evaluated quarterly and annually.
d. The Draft Plan fails to describe the Scalability of the equipment software. Will the database be able to handle the added data from all equipment over the long-term?
e. The Draft Plan fails to describe the Redundancy of the equipment software. Data must be replicated across multiple servers, or, stored in cloud-based IT backup and computing power system architecture to insure continuity of data in the event of a server going down.

f. The Draft Plan fails to describe the Secure encryption and other security features. While air monitoring data are not generally considered sensitive or confidential we want to ensure that the data is protected from hackers and intruders.
g. The Draft Plan fails disclose if equipment calibration will comply with an USEPA FEM Instrument and/or FRM instrument.
h. All instruments deployed must use standard operating procedures, including calibration and Quality Control in compliance with promulgated EPA methods. If there is a technology that has an official method, such as FTIR, only, for fenceline monitoring, this technology should follow the quality control specified in the method. If there is a fenceline technology, that can achieve detection limits low enough to replace instruments operating without a promulgated method, such as UV DOAS, such technology should be implemented. We are aware of at least one FTIR.
i. The Draft Plan fails to assure that the original raw database cannot be deleted or altered and the original maintained. Scripts can be developed to then pull data from the database (without altering the database itself) and process the raw data for quality control purposes, data display, etc.
j. There can be no long term data and trend analysis on short emissions of chemicals and substances. Short term releases can be a significant cause of public emergency visits.
k. The Draft Plan fails to require the SCAQMD to post on-line all Flaring emission incidents information. For example the SCAQMD used to post on-line information on the number of Planned Flare Events vs Unplanned Flaring Events which has now been removed from their website. CFASE had discovered that the number of Unplanned Flaring Events had exceeded the number of Planned Flaring Events and that the emissions from Unplanned Flaring Events exceeded the annual reported emissions.
l. Monitoring equipment must remain operational as consistently as technology will allow. We are aware of at least one manufacturer whose monitoring equipment is capable of achieving a 90% availability uptime.

4. **Provide context to the data so that local communities can distinguish air quality in their location from other locations in the Basin and understand the potential health impacts associated with local air quality near petroleum refinery operations;**

a. The Draft Plan fails to acknowledge that specific chemicals and substances have different risk levels and mitigation measures.
b. The Draft Plan fails to include specific chemical and substances public safety detection levels necessary to comply with all risk levels. Such as included in the OEHHA Chemical Database which includes, Cancer Risk, Air-Acute RELs,8-Hour RELs, Chronic REl, Safe Harbor Levels etc..
c. The Draft Plan does not state or assure that all detection limits will meet state and federal regulatory requirements. The Acrolein MDL is higher than the 1 hour REL threshold as defined by regulators. All targeted compounds should be measured based on MDLs (Minimum Detection Limits) which are less than the regulatory requirement, as published by the OEHHA. Need to be able to measure and report Acrolein MDL's based on the OEHHA regulatory requirement of less than 1.0(PPB),

one hour acute measurement. Acrolein MDL criteria should be based on OEHHA 2017 thresholds. The public cannot be exposed to more than 1ppb for one hour.

The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero.

d. The Draft Plan fails to include specific information on the potential and actual public health impacts from exposure to specific chemicals and substances such as Reproductive, Cognitive, Neurological, Cardiovascular, Physical Development, Endocrine Disorders, Immune Death etc..
e. The Draft Plan fails to include specific information on the individual and cumulative impact from exposure to chemicals which are categorized as an immediately dangerous to life or health condition.
f. The Draft Plan fails to include specific information on where and how specific chemicals and substances are used in manufacturing and in products. Such as in plastic products, packaging, preservatives, detergents, dyes, resins, flavoring agents, solvents, pesticides, herbicides etc..
g. The Draft Plan fails to include specific information on how the public can be exposed such as through breathing inhalation and skin dermal absorption.
h. The Draft Plan fails to include specific information on how OEHHA developed Child Specific Reference Doses (chRDs) for seventy-eight chemical contaminants to be of greatest concern at school sites for causing adverse effects in children.
i. The Draft Plan fails to reference that NOAA Office of Response and Restoration and The National Institute of Occupational Safety and Health (NIOSH) defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."
j. The Draft Plan does not, and must, require the minimum detection level of ppb for each type of chemical or substance.

5. **Provide a notification system for communities near refineries when emissions exceed thresholds (e.g., RELs); and**

a. The Draft Plan fails to include real time air monitoring equipment that can detect chemical and substances at ppb levels in one minute intervals.
b. One-minute intervals are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.
c. We applaud the refinery for its Table 6 easy portrayal of MDLs and UDLs.

6. **Provide quarterly reports summarizing the measurements, data completeness, and quality assurance.**

a. The Draft Plan fails to include information that highlights exceedance of air quality standard, public health standards, public safety requirements and mitigation taken.

b. The Draft Plan fails to require a Root Cause Analysis to be included in the report for every exceedance of a California State or Federal Air Quality Standard, MDL and/or REL.

The Air Monitoring Plan Shall Include Detailed Information For The Following:

1. **An evaluation of routine emission sources at the refinery (e.g., utilizing remote sensing or other measurement techniques or modeling studies, such as those used for health risk assessments);**

   a. The Draft Plan fails to include a definition of routine emissions. The definition shall include all chemical and substance emissions identified in the Title V Permit and which are reported annually to the SCAQMD and US EPA.
   b. The Draft Plan does not include and address categories of chemicals and substances such as PAH's (Polycyclic Aromatic Hydrocarbons), POM's (Polycyclic Organic Matter), HAPs (Hazardous Air Pollutants)/TACs (Toxic Air Pollutants).
   c. The Draft Plan does not include a comprehensive list of all chemical's within a category such as VOC's.
   d. The Draft Plan fails to require that all chemicals and substances will be monitored, measured and reported. The limited short selected list of chemicals to be monitored is not acceptable.
   e. The Draft Plan fails to include a list of all air monitoring equipment that will be used to monitor all chemical and substance emissions.

2. **An analysis of the distribution of operations and processes within the refinery to determine potential emission sources;**

   a. The Draft Plan fails to include emission sources in the photo. According to information in the Draft Plan it states that the HARP2 Data Base identified 277 emission sources at this facility.
   b. The Draft Plan failed to require the identification of all emissions control equipment identified in the Title V Permit.
   c. The Draft Plan failed to require the identification of all equipment malfunctions, breakdowns and power failures which have occurred in the past at the refinery. Information must also include past NOVs.

3. **An assessment of air pollutant distribution in surrounding communities (e.g., mobile surveys, gradient measurements, and/or modeling studies used for health risk assessments);**

   a. One-minute real time reporting intervals, dispersion maps and illustrations are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

      NIOSH defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

b. The Draft Plan failed to acknowledge and address that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances at lower ground levels and a further distribution thus resulting in increased public health impacts and increased risk exposure.

4. **A summary of fenceline air monitoring instruments and ancillary equipment that are proposed to continuously measure, monitor, record, and report air pollutant levels in real-time near the petroleum refinery facility perimeter (i.e., fenceline);**

a. The Draft Plan failed to include an Addendum which lists the specific equipment manufacturer, model number, software program and preprogramed attributes that the refinery plans to use that the public can review and comment.
b. We want AQMD and the refinery to identify, select and use the most accurate air monitoring and reporting instruments. An open bid request that receives responses from manufacturers of less accurate and reporting air monitoring equipment and the lowest bidder is not acceptable.

5. **A summary of instrument specifications, detectable pollutants, minimum and maximum detection limits for all air monitoring instruments;**

a. The Draft Plan fails to require all monitoring equipment to be capable of detecting emission limits as low as ppb, our requested detection level.
b. The Draft Plan fails to disclose if monitoring equipment can report in true real-time in one-minute intervals, our requested time interval.
c. The Draft Plan fails to address if selected equipment will require heaters and fans due to weather temperature and humidity changes. Can the air monitoring equipment be impacted by insects, birds and mammals?
d. The Draft Plan fails to address if selected equipment will require stabilizers and shock absorbers to accommodate earthquakes and ground movement. Does the facility exist on-top of a known earthquake fault, built on filled-in land and could it be impacted by land subsidence or liquid faction. Will sitting have to be inspected and adjusted after every earthquake or every year due to land movement? We request that all types of air monitoring equipment and supporting equipment be inspected from all potential negative impacts and be included in all Inspection Plan Checklists and Maintenance Plan Schedules.

6. **Proposed monitoring equipment siting and selected pathways (when applicable) for fenceline instruments, including the justification for selecting specific locations based on the assessments mentioned above;**

a. The Draft Plan fails to include 100% fenceline air monitoring coverage without adequate explanation. Any equipment line-of-sight obstacles, site constraints, multiple buildings, terrain and parking space issues should have warranted an alternative plan with alternative configurations to address these issues, including adding more air monitoring instruments and/or raising the height of those instruments.

b. The Draft Plan fails to include the monitoring, measurement and reporting of 100% emissions and chemicals from all equipment including chemical delivery and shipment loading and unloading sources throughout the facility and not just the fenceline perimeters. Emissions from all refinery areas will travel and disperse with wind conditions and atmospheric inversions present.
c. The Draft Plan fails to explain if the proposed or selected equipment can accommodate the proposed measuring path distances and maintain accuracy. Weak signals and weather conditions can significantly affect the accuracy of data or even the ability to take measurements and collect data. We request that preliminary tests be required for all proposed distances approaching the maximum measurement capability of an air monitoring instrument.
d. The Draft Plan fails to include GIS Coordinates and the Height Elevations at which equipment will be placed.

7. **Operation and maintenance requirements for the proposed monitoring systems;**

a. The Draft Plan failed to include an Addendum which included the detailed Operation and Maintenance Plan & Procedures that the public can review and comment.
b. The Operation and Maintenance Plan & Procedures must be capable of supporting a true real-time monitoring, measurement and reporting 24/7/365 and a 90% availability uptime requirement.
c. Air Monitoring Equipment that fails or malfunctions must be replaced within one-hour to protect public lives and health.

8. **An implementation schedule consistent with the requirements of Rule 1180;**

The Draft Plan failed to include a detailed Implementation Plan and Schedule. We also request that it include assessments that we have identified in these public comments.

9. **Procedures for implementing quality assurance and quality control of data**;

a. The Draft Plan fails to state what EPA QA/QC procedures, methods or guidelines they will follow. Will the QA Plan comply with the US EPA Guide to Writing Quality Assurance Project Plans for Ambient Air Monitoring Networks and 40 CFR Pt. 58 App. A QA Requirements.
b. The Draft Plan fails to state what true real-time quality control on the measurement process will be used. Calculating the atmospheric levels (for each and every measurement) against the known atmospheric level can be used as a real time quality check of the measurement process. We request the use of constant atmospheric gases such as N_2O.
c. The Draft Plan fails to include a true real-time quality control process (for each and every measurement) based on an effective correlation, Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra method in order to minimize false positive and false negative measurements.
d. The Draft Plan fails to state that the public and AQMD will have access to all quality control data, formulas, validation and process information.

e. The Draft Plan fails to include a real time spectral validation process for each chemical and substance. The public and AQMD shall have access to all real time spectral validation checks on a real time basis.
f. Suspected emissions release data should be reviewed and confirmed within minutes to protect the health and safety of community. The public cannot wait days or months for confirmed data.
g. The Draft Plan included Quality Assurance Project Pan (QAPP), Quality Control Plan & Standard Operating Procedures (SOPs) does not include the issues and requests discussed in these comments that the public can review and comments. The included information is not adequate for a comprehensive assessment by the public.
h. The Draft Plan does not include a real time, validated data reporting procedure to public. The Draft Plan suggests monthly validation of data, not real time validation of reported data to the public which is unacceptable. The Draft Plan suggests conducting continuous real-time validation checks of measurements using two methods for quantification but fails to disclose the two methods will be used.
i. Fenceline monitoring systems are projected to generate enormous amount of data. We estimate that each refinery will generate over 1 million measurements per month, which cannot be done by a person or team of people. This means that there will be a need to deploy full automatic quality control procedures in order to be able to provide online validation for all real time reported data. The Public is entitled to receive real time checked and validated information which will generate minimum false negative / positive alarms.
j. We suggest 6 times Sigma (signal to noise level to be reported) to be the effective criteria for screening out measurements out of reported data. Need to apply real time quality control checks on the signal strength for each and every single measurement. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
k. Effective criteria for screening out false negative and false positive measurements from reported data must be utilized. We are aware of at least one solution provider which can meet the following capabilities for effective real time Quality Control should procedures, which include:
    1. Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra.
    2. A Signal strength quality control procedure. Real time quality control checks on the signal strength for each and every single measurement must be applied. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
    3. Real time quality control on the measurement process, utilizing known concentrations of an atmospheric gas, such as N_2O detection and real time comparison to the known atmospheric values.
    4. Real time alarms when instruments are out of compliance.
    5. Real time MDL calculation.
    6. Regulator and Third Party Validator access to all quality control processes, such as real time spectral validations and control checks on a real time basis.

10. **A web-based system for disseminating information collected by the fenceline air monitoring system;**

    a. We have attached an example of the information and format that we would like to see used in all Draft Plans.

Table 7-1: Crosswalk between Rule 1180 requirements and report sections where they are discussed

Rule 1180 Requirements for Plan	Addressed in Plan Section...
PUBLIC WEBSITE	
Web based system for disseminating information from fenceline monitors	7.2.2, 7.2.3, 7.2.4
Educational material	7.2.7
Description of pollutants	7.2.7
Description of background levels and context	7.2.7, 7.3
Hyperlinks to relevant sources of information	7.2.7
Means for the public to provide comments and feedback	7.2.6
Procedures to respond to comments and feedback from public	7.2.6
Provide relevant information for all downwind communities	7.3, 7.4.2
Quarterly data summary reports	7.5
Communication method for public notifications	7.4
Notifications about activities that could affect the fenceline air monitoring system	7.4.2
Notifications about the availability of periodic reports	7.4.3
Notifications about air quality threshold exceedances	7.4.1
DATA MANAGEMENT	
Procedures to upload data from the instruments to the website	7.1.1
Quality control methods	7.1.2
Quality control flags definition	7.1.2
Archived data with chain of custody information and QA/QC flags	7.1.2
5-minute average data resolution	7.1.1
Means for disseminating information to local response agencies and SCAQMD	7.1, 7.4.1

    b. Due to public comment time restraints we need additional time to provide more detail information requirements and request that there be a public meeting to supplement the table.

11. **Details of the proposed public notification system; and**

    a. Our collaborative wishes to propose the following regarding public notification:

    Types of Public Notification

Tier I Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate death (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 1 minute from detection.

Tier II Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate or delayed permanent adverse health effects (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 5 minutes from detection.

Tier III Equipment Failure or Malfunction, Power Failure, Weather Impact, Internet Outage etc.

No longer than 10 minutes from detection.

Tier IV The posting of new information such as Report Availability, Planned Maintenance, New Equipment Purchase, Public Tour etc.

No longer than 1 hour after availability.

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

b. Methods of Public Notification

Emergency (In order of priority)

a. Direct phone call to home or residence
b. Direct phone call to cell phone
c. Direct phone call to designated person
d. Direct phone call to work or location
e. Text message to cell phone
f. Community Door-to-Door
g. Audio Alarm
h. Mobile Vehicle Speaker Announcements
i. Police/Emergency Response vehicle Speaker Announcements

Non-Emergency (In order of priority)

a. Personal email
b. Listed social media
c. US postal mail
d. Door-to-Door drop-off

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

c. We want real time sampling, reporting and public notification based on one-minute interval collected data. Consistent with the intent of Rule 1180, refineries should be obligated to report data to the public based on real time standards, no greater than 1 min from detection.
d. Residents need to have the earliest possible warning to be able to safely evacuate in time and/or to prepare to shelter-in-place.

12. **Demonstration of independent oversight.**

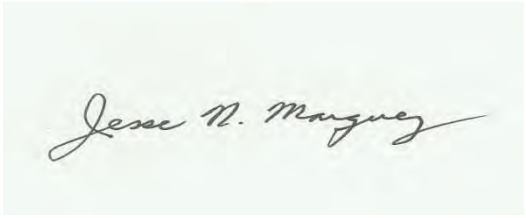
The Draft Plan failed to include an Independent Oversight Plan, Audit Details and identify an Independent 3rd Party Monitor.

CFASE et al Public Comments regarding the South Coast AMD - Rule 1180 compliance to AB1647 (Muratsuchi) Petroleum Refineries: Air Monitoring Systems, October 8, 2017:

a. Rule1180 does not comply with AB1647 Section 42705.6 (a) (1) definition of. "Refinery-Related Community Air Monitoring System," because the Draft Plan does not identify all categories of sensitive receptor locations near the refinery. As some example, there is a Child Care Center, Children, Senior Citizen Residents, Pregnant Women and Residents With Pre-Existing Health Conditions fenceline to the refinery.
b. Rule1180 does not comply with AB1647 Section 42705.6 (d) The district and the owner or operator of a petroleum refinery shall collect real-time data from the refinery-related community air monitoring system and the fence-line monitoring system and shall maintain records of that data. To the extent feasible, the data generated by these systems shall be provided to the public as quickly as possible in a publicly accessible format.

For any questions or information please send all correspondence or questions to me as principal contact regarding these public comments.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744
310-590-0177

Ricardo Pulido
Executive Director
Community Dreams
1601 N. Wilmington Blvd., Ste. B2
Wilmington, CA 90744
mr.rpulido@gmail.com
310-567-0748

Pastor Alfred Carrillo
Apostolic Faith Center
1510 E. Robidoux St.
Wilmington, CA 90744
alfredcarrillo@msn.com
310-940-6281

Magali Sanchez-Hall, MPH
Executive Director
EMERGE
913 East O Street
Wilmington, CA 90744
mssanchezhall7@gmail.com
646-436-0306

Chaplain Anthony Quezada
American Legion Post 6
1927 E. Plymouth St.
Long Beach, CA 90810
m.in.usa.aq@gmail.com
310-466-2724

Anabell Romero Chavez
Wilmington Improvement Network
Board Member
1239 Ronan Ave.
Wilmington, CA 90744
anab3ll310@yahoo.com
310-940-4515

Dr. John G. Miller, MD
San Pedro & Peninsula Homeowners Coalition
President
1479 Paseo Del Mar
San Pedro, CA 90731
igornla@cox.net
310-548-4420

Joe R. Gatlin
Vice President
NAACP
San Pedro-Wilmington Branch # 1069
225 S. Cabrillo Ave.
San Pedro, CA 90731
joergatlin45k@gmail.com
310-766-5399

Modesta Pulido
Chairperson
St. Philomena Social Justice Ministry
22106 Gulf Ave.
Carson, CA 90745
vdepulido@gmail.com
310-513-1178

Robina Suwol
Executive Director
California Safe Schools
P.O. Box 2756
Toluca Lake, CA 91610
robinasuwol@earthlink.net
818-261-7965

Jane Williams
Executive Director
California Communities Against Toxics
P.O. Box 845
Rosamond, CA 93560
dcapjane@aol.com
661-256-2101

Cynthia Babich
Executive Director
Del Amo Action Committee
4542 Irone Ave.
Rosamond, CA 93560
delamoactioncommittee@gmail.com
310-769-4813

Mitzi Shpak
Executive Director
Action Now
2062 Lewis Ave.
Altadena, CA 91001
msmshpak@gmail.com
626-825-9795

Joe Weistein
Chairman
Citizens About Responsible Planning (CARP)
Long Beach, CA
jweins113@hotmail.com

Coalition For A Safe Environment
California Kids IAQ
Community Dreams
EMERGE
American Legion Post 6
Wilmington Improvement Network
San Pedro & Peninsula Homeowners Coalition
NAACP- San Pedro-Wilmington Branch # 1069
California Communities Against Toxics
Apostolic Faith Center
California Safe Schools
Del Amo Action Committee
Action Now
St. Philomena Social Justice Ministry
Citizens About Responsible Planning

January 11, 2019

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765
909-396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya
Program Supervisor
909-396-3157
opikelnaya@aqmd.gov

Rule1180@aqmd.gov

Re: Phillips 66 - Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan
Su: CFASE et al Public Comments Submission

Dear South Coast AQMD:

On behalf of the undersigned organizations we would like to submit our public comments on the Phillips 66 - Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan.

While we recognize that the plans were prepared in response with the South Coast AQMD (SCAQMD) Rule 1180 and AB 1647 we wish to state the following for the record:

1. It is our opinion that the Phillips 66 - Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan does not comply with Rule 1180, AB1647 and AB617.

2. We submit our public comments on this plan so as not to relinquish our rights and public comments regarding the inadequacies of the Draft Refinery Fenceline Air Monitoring Plan, Rule 1180 and Rule 1180 Fenceline Air Monitoring Guidelines.
3. That the SCAQMD did not adopt the majority of all requests and recommendations made by the Public, Disadvantaged Communities and Environmental Justice Communities regarding Rule 1180.
4. That the SCAQMD is aware of the adoption into law of AB617 which has additional legal requirements and will have new mandates for Fenceline Air Monitoring.
5. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent will during the AB617 Community Plan preparation, public meetings and public participation process will make new requests, recommendations and requirements that may exceed the SCAQMD Rule 1180.
6. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent formally request that the SCAQMD wait until the AB617 Community Plans have been completed so that all Fenceline Air Monitoring Requirements can be incorporated into the SCAQMD Rule 1180 Fenceline Air Monitoring Plans.
7. We request that the public have an opportunity to review and comment on the Final Plan.

CFASE et al Public Comments regarding compliance to the South Coast AMD - Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines, December 2017:

Key Objectives:

1. **Provide information about various air pollutant levels (i.e., determined by air pollutant concentration) measured in real-time in durations short enough to adequately address significant emissions changes from refinery operations;**

    a. The Draft Plan does not identify all types of refinery emissions categories and chemicals that are allowed such as in the SCAQMD issued Title V Permit and what is reported annually to SCAQMD and USEPA.
    b. The Draft Plan does not include current available refinery emissions data.
    c. The Draft Plan states that data will be averaged and displayed at 5-minutes intervals which, alone, is unacceptable. The data should be reported at 5 minute and in real time, at 1 minute intervals to provide sufficient time for the community to respond and for the refinery to mitigate 10 minute emission concentrations in accordance to the Acute Exposure Guideline Level (AEGL) as specified in Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017. We are aware of at least one system that is capable of averaging, reporting, and displaying data, in multiple intervals, simultaneously.
    d. The Draft Plan states that data will appear on the website within 10-minutes. This is unacceptable and not real time. Real time data should be uploaded at one-minute intervals.
    e. The Draft Plan states that data will be made available via rolling 24-hour trend of the five-minute data for each gas reported which is unacceptable. We want real time data and reporting every one-minute, displaying both one minute and 5 minute averages.

f. The Draft Plan fails to disclose how total VOC's will be calculated. Most of the refinery emissions are alkanes, therefore, TVOC should be defined as total alkanes and should be measured, accurately, using the estimated molecular weight, presented in combination with the Total Alkanes concentrations in parts per billion, as described Method EPA/600/R-09/136, and in the EPA Guidance Document Measurement of Emission from Produced Water Ponds, October, 2009, Appendix A. This will provide the most accurate measurement of release quantities
g. Real time, one-minute reporting to the public to provide critical alerts, preventing contaminants from entering the community in advance of reporting. For example, a wind speed of around 2m per second at time of an event, results in contaminated air reaching a distance of 120m. In 10min, that air will move a distance of 1,200m. With refineries located very close to densely populated areas, such risks and exposure to public health are not acceptable.
h. Shorter reporting intervals will minimize the possibility of data manipulation, unauthorized software program attribute changes, and inaccurate reporting to the public. All the reporting should be subject to spectral validation in real time to insure published data is accurate and precise as published. We are aware of at least one manufacturer whose monitoring equipment is capable of real time data collection, data analysis, quality control and reporting every one-minute

2. **Gather accurate air quality and meteorological data to identify both the time(s) and location(s) of various air pollutant levels near refinery operations and provide a comparison of these levels to other pollutant levels monitored in the Basin;**

a. The Draft Plan does not, and must, require the minimum detection level of ppb for each type of chemical or substance.
b. The Draft Plan failed to acknowledge that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances, wider dispersion and at further distances at lower ground levels thus resulting in increased public health impacts and increased risk exposure.
c. The Draft Plan failed to acknowledge and address that Santa Ana Winds have a significant impact on refinery emissions dispersion.

3. **Track long-term air pollutant levels, variations, and trends over time at or near the property boundaries of petroleum refineries and in nearby communities;**

a. The Draft Plan fails to require real-time monitoring 24/7/365.
b. The Draft Plan fails to require quality control of the real-time monitoring, data and equipment 24/7/365.
c. The Draft Plan fails to include any criteria for system availability for a 24/7/365 operation. We request a 90% availability uptime requirement. Availability will be calculated as the ratio between (100% absolute operation time, minus poor visibility conditions time, minus system idle time) divided by (100% absolute operation time). Availability criteria should be calculated and reported on a quarterly basis for every fenceline system. Availability should be evaluated quarterly and annually.
d. The Draft Plan fails to describe the Scalability of the equipment software. Will the database be able to handle the added data from all equipment over the long-term?

e. The Draft Plan fails to describe the Redundancy of the equipment software. Data must be replicated across multiple servers, or, stored in cloud-based IT backup and computing power system architecture to insure continuity of data in the event of a server going down.
f. The Draft Plan fails to describe the Secure encryption and other security features. While air monitoring data are not generally considered sensitive or confidential we want to ensure that the data is protected from hackers and intruders.
g. The Draft Plan fails disclose if equipment calibration will comply with an USEPA FEM Instrument and/or FRM instrument.
h. All instruments deployed must use standard operating procedures, including calibration and Quality Control in compliance with promulgated EPA methods. If there is a technology that has an official method, such as FTIR, only, for fenceline monitoring, this technology should follow the quality control specified in the method. If there is a fenceline technology, that can achieve detection limits low enough to replace instruments operating without a promulgated method, such as UV DOAS, such technology should be implemented. We are aware of at least one FTIR.
i. The Draft Plan fails to assure that the original raw database cannot be deleted or altered and the original maintained. Scripts can be developed to then pull data from the database (without altering the database itself) and process the raw data for quality control purposes, data display, etc.
j. There can be no long term data and trend analysis on short emissions of chemicals and substances. Short term releases can be a significant cause of public emergency visits.
k. CFASE conducted a Trend Analysis of ConocoPhillips Wilmington Refinery Benzene Annual Emissions Reporting data to the SCAQMD from the years 2000-2015 which revealed that Benzene had increased yet the SCAQMD did not know and has done nothing to reduce this trend. The Draft Plan fails to include any requirements or penalties when a trend discloses an increase in emissions.
l. The Draft Plan fails to require the SCAQMD to post on-line all Flaring emission incidents information. For example the SCAQMD used to post on-line information on the number of Planned Flare Events vs Unplanned Flaring Events which has now been removed from their website. CFASE had discovered that the number of Unplanned Flaring Events had exceeded the number of Planned Flaring Events and that the emissions from Unplanned Flaring Events exceeded the annual reported emissions.
m. Monitoring equipment must remain operational as consistently as technology will allow. We are aware of at least one manufacturer whose monitoring equipment is capable of achieving a 90% availability uptime.

4. **Provide context to the data so that local communities can distinguish air quality in their location from other locations in the Basin and understand the potential health impacts associated with local air quality near petroleum refinery operations;**

a. The Draft Plan fails to acknowledge that specific chemicals and substances have different risk levels and mitigation measures.
b. The Draft Plan fails to include specific chemical and substances public safety detection levels necessary to comply with all risk levels. Such as included in the

OEHHA Chemical Database which includes, Cancer Risk, Air-Acute RELs,8-Hour RELs, Chronic REl, Safe Harbor Levels etc..

c. The Draft Plan does not state or assure that all detection limits will meet state and federal regulatory requirements. The Acrolein MDL is higher than the 1 hour REL threshold as defined by regulators. All targeted compounds should be measured based on MDLs (Minimum Detection Limits) which are less than the regulatory requirement, as published by the OEHHA. Need to be able to measure and report Acrolein MDL's based on the OEHHA regulatory requirement of less than 1.0(PPB), one hour acute measurement. Acrolein MDL criteria should be based on OEHHA 2017 thresholds. The public cannot be exposed to more than 1ppb for one hour.

The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero.

d. The Draft Plan fails to include specific information on the potential and actual public health impacts from exposure to specific chemicals and substances such as Reproductive, Cognitive, Neurological, Cardiovascular, Physical Development, Endocrine Disorders, Immune Death etc..
e. The Draft Plan fails to include specific information on the individual and cumulative impact from exposure to chemicals which are categorized as an immediately dangerous to life or health condition.
f. The Draft Plan fails to include specific information on where and how specific chemicals and substances are used in manufacturing and in products. Such as in plastic products, packaging, preservatives, detergents, dyes, resins, flavoring agents, solvents, pesticides, herbicides etc..
g. The Draft Plan fails to include specific information on how the public can be exposed such as through breathing inhalation and skin dermal absorption.
h. The Draft Plan fails to include specific information on how OEHHA developed Child Specific Reference Doses (chRDs) for seventy-eight chemical contaminants to be of greatest concern at school sites for causing adverse effects in children.
i. The Draft Plan fails to reference that NOAA Office of Response and Restoration and The National Institute of Occupational Safety and Health (NIOSH) defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

5. **Provide a notification system for communities near refineries when emissions exceed thresholds (e.g., RELs); and**

a. The Draft Plan fails to include all chemical and substances RELs (Recommended Exposure Level) to allow the public to know that a refinery emission exceeds a threshold.
b. The Draft Plan fails to include real time air monitoring equipment that can detect chemical and substances at ppm levels in one minute intervals.
c. One-minute intervals are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

6. **Provide quarterly reports summarizing the measurements, data completeness, and quality assurance.**

    a. The Draft Plan fails to include information that highlights exceedance of air quality standard, public health standards, public safety requirements and mitigation taken.
    b. The Draft Plan fails to require a Root Cause Analysis to be included in the report for every exceedance of a California State or Federal Air Quality Standard and/or REL.

The Air Monitoring Plan Shall Include Detailed Information For The Following:

1. **An evaluation of routine emission sources at the refinery (e.g., utilizing remote sensing or other measurement techniques or modeling studies, such as those used for health risk assessments);**

    a. The Draft Plan fails to include a definition of routine emissions. The definition shall include all chemical and substance emissions identified in the Title V Permit and which are reported annually to the SCAQMD and US EPA.
    b. The Draft Plan does not include and address categories of chemicals and substances such as PAH's (Polycyclic Aromatic Hydrocarbons), POM's (Polycyclic Organic Matter), HAPs (Hazardous Air Pollutants)/TACs (Toxic Air Pollutants).
    c. The Draft Plan does not include a comprehensive list of all chemical's within a category such as VOC's.
    d. The Draft Plan fails to require that all chemicals and substances will be monitored, measured and reported.
    e. The Draft Plan fails to include a list of all air monitoring equipment that will be used to monitor all chemical and substance emissions.

2. **An analysis of the distribution of operations and processes within the refinery to determine potential emission sources;**

    a.
    b. The Draft Plan failed to require the identification of all emissions control equipment identified in the Title V Permit.
    c. The Draft Plan failed to require the identification of all equipment malfunctions, breakdowns and power failures which have occurred in the past at the refinery. Information must also include past NOVs.

3. **An assessment of air pollutant distribution in surrounding communities (e.g., mobile surveys, gradient measurements, and/or modeling studies used for health risk assessments);**

    a. The Seasonal Wind Roses illustrated in Figure 2.2 are not accurate for Wilmington because of the weather and wind influence of San Pedro Bay. The illustration is not acceptable because we need the wind and emissions distribution in real time by one-minute intervals, hourly and for 24hrs.. On one significant ConocoPhillips Flaring Event Day, a power failure resulted in Flaring for more than 24 hrs. releasing tons of emissions per hour.

b. CFASE has witnessed on one ConocoPhillips Flaring Event Day that wind direction at approximately 1:00pm was North by Northeast, the smoke emissions trail dispersion was more than 10 miles into the city of Carson passing the San Diego Freeway I-405 and at 6:00pm was South by Southeast into south Wilmington and the Port of Los Angeles.
c. Figures 2.3-2.27 Emissions information illustrated are not accurate for the reasons stated in a. and b.
d. One-minute real time reporting intervals, dispersion maps and illustrations are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

   NIOSH defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

e. Table 2.1 Column 4 title is Emissions Greater Than 5,000 Pounds Per Year is not acceptable because certain types of chemicals and substances are highly toxic in small quantities.
f. The Draft Plan failed to acknowledge and address that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances at lower ground levels and a further distribution thus resulting in increased public health impacts and increased risk exposure.

4. **A summary of fenceline air monitoring instruments and ancillary equipment that are proposed to continuously measure, monitor, record, and report air pollutant levels in real-time near the petroleum refinery facility perimeter (i.e., fenceline);**

   The Draft Plan failed to include an Addendum which lists the specific equipment manufacturer, model number, software program and preprogramed attributes that the refinery plans to use that the public can review and comment.

5. **A summary of instrument specifications, detectable pollutants, minimum and maximum detection limits for all air monitoring instruments;**

   a. The Draft Plan fails to require all monitoring equipment to be capable of detecting emission limits as low as ppb, our requested detection level.
   b. The Draft Plan fails to disclose if monitoring equipment can report in real-time in one-minute intervals, our requested time interval.
   c. The Draft Plan fails to address if selected equipment will require heaters and fans due to weather temperature and humidity changes. Can the air monitoring equipment be impacted by insects, birds and mammals?
   d. The Draft Plan fails to address if selected equipment will require stabilizers and shock absorbers to accommodate earthquakes and ground movement. Does the facility exist on-top of a known earthquake fault, built on filled-in land and could it be impacted by land subsidence or liquid faction. Will sitting have to be inspected and adjusted after every earthquake or every year due to land movement? We request

that all types of air monitoring equipment and supporting equipment be inspected from all potential negative impacts and be included in all Inspection Plan Checklists and Maintenance Plan Schedules.

6. **Proposed monitoring equipment siting and selected pathways (when applicable) for fenceline instruments, including the justification for selecting specific locations based on the assessments mentioned above;**

   a. The Draft Plan fails to include 100% fenceline air monitoring coverage without adequate justification. Any equipment line-of-sight obstacles, site constraints, multiple buildings, terrain and parking space issues should have warranted an alternative plan with alternative configurations to address these issues, including adding more air monitoring instruments and/or raising the height of those instruments.
   b. The Draft Plan fails to include the monitoring, measurement and reporting of 100% emissions and chemicals from all equipment sources throughout the facility including chemical delivery and shipment loading and unloading and not just the fenceline perimeters. Emissions from all refinery areas The Draft Plan fails to include 100% fenceline air monitoring coverage without explanation. Any equipment line-of-sight obstacles should have been disclosed.
   c. The Draft Plan fails to explain if the proposed or selected equipment can accommodate the proposed measuring distances. Weak signals and weather conditions can significantly affect the accuracy of data or even the ability to take measurements and collect data.
   d. The Draft Plan fails to include GIS Coordinates and the Height Elevations at which equipment will be placed.

7. **Operation and maintenance requirements for the proposed monitoring systems;**

   a. The Draft Plan failed to include an Addendum which included the detailed Operation and Maintenance Plan & Procedures that the public can review and comment.
   b. The Operation and Maintenance Plan & Procedures must be capable of supporting a true real-time monitoring, measurement and reporting 24/7/365 and a 90% availability uptime requirement.
   c. Air Monitoring Equipment that fails or malfunctions must be replaced within one-hour to protect public lives and health.

8. **An implementation schedule consistent with the requirements of Rule 1180;**

   a. The Draft Plan failed to include an Implementation Plan and Schedule that includes an on-site preliminary assessments of air monitoring equipment and their maximum path distances accuracy.
   b. The Draft Plan failed to include an Implementation Plan and Schedule that includes assessments that we have identified in these public comments.

9. **Procedures for implementing quality assurance and quality control of data**;

a. The Draft Plan fails to state what EPA QA/QC procedures, methods or guidelines they will follow. Will the QA Plan comply with the US EPA Guide to Writing Quality Assurance Project Plans for Ambient Air Monitoring Networks and 40 CFR Pt. 58 App. A QA Requirements.
b. The Draft Plan fails to state what real time quality control on the measurement process will be used. Calculating the atmospheric levels (for each and every measurement) against the known atmospheric level can be used as a real time quality check of the measurement process. We request the use of constant atmospheric gases such as N_2O.
c. The Draft Plan fails to include a real time quality control process (for each and every measurement) based on an effective correlation, Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra method in order to minimize false positive and false negative measurements.
d. The Draft Plan fails to state that the public and AQMD will have access to all quality control data, formulas, validation and process information.
e. The Draft Plan fails to include a real time spectral validation process for each chemical and substance. The public and AQMD shall have access to all real time spectral validation checks on a real time basis.
f. The Draft Plan states that," all data exceeding a threshold will be qualified as preliminary subject to manual QA/QC review for quarterly report," is unacceptable. Data QA/QC should be in real time and within one-minute. Suspected release data should be reviewed and confirmed within minutes to protect the health and safety of community. The public cannot wait days or months for confirmed data.
g. The Draft Plan failed to include an Addendum which included the detailed Quality Assurance Project Pan (QAPP), Quality Control Plan & Standard Operating Procedures (SOPs) that the public can review and comment. The included outline is not adequate for a comprehensive assessment by the public.
h. The Draft Plan does not include a real time, validated data reporting procedure to public. The Draft Plan suggests monthly validation of data, not real time validation of reported data to the public which is unacceptable. The Draft Plan suggests conducting continuous real-time validation checks of measurements using two methods for quantification but fails to disclose the two methods will be used.
i. Fenceline monitoring systems are projected to generate enormous amount of data. We estimate that each refinery will generate over 1 million measurements per month, which cannot be done by a person or team of people. This means that there will be a need to deploy full automatic quality control procedures in order to be able to provide online validation for all real time reported data. The Public is entitled to receive real time checked and validated information which will generate minimum false negative / positive alarms.
j. We suggest 6 times Sigma (signal to noise level to be reported) to be the effective criteria for screening out measurements out of reported data. Need to apply real time quality control checks on the signal strength for each and every single measurement. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
k. Effective criteria for screening out false negative and false positive measurements from reported data must be utilized. We are aware of at least one solution provider

which can meet the following capabilities for effective real time Quality Control should procedures, which include:

1. Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra.
2. A Signal strength quality control procedure. Real time quality control checks on the signal strength for each and every single measurement must be applied. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
3. Real time quality control on the measurement process, utilizing known concentrations of an atmospheric gas, such as N_2O detection and real time comparison to the known atmospheric values.
4. Real time alarms when air monitoring instruments are out of compliance.
5. Real time MDL calculation.
6. Regulator and Third Party Validator access to all quality control processes, such as real time spectral validations and control checks on a real time basis.

10. **A web-based system for disseminating information collected by the fenceline air monitoring system;**

a. We have attached an example of the information and format that we would like to see used in all Draft Plans.

Table 7-1: Crosswalk between Rule 1180 requirements and report sections where they are discussed

Rule 1180 Requirements for Plan	Addressed in Plan Section...
PUBLIC WEBSITE	
Web based system for disseminating information from fenceline monitors	7.2.2, 7.2.3, 7.2.4
Educational material	7.2.7
Description of pollutants	7.2.7
Description of background levels and context	7.2.7, 7.3
Hyperlinks to relevant sources of information	7.2.7
Means for the public to provide comments and feedback	7.2.6
Procedures to respond to comments and feedback from public	7.2.6
Provide relevant information for all downwind communities	7.3, 7.4.2
Quarterly data summary reports	7.5
Communication method for public notifications	7.4
Notifications about activities that could affect the fenceline air monitoring system	7.4.2
Notifications about the availability of periodic reports	7.4.3
Notifications about air quality threshold exceedances	7.4.1
DATA MANAGEMENT	
Procedures to upload data from the instruments to the website	7.1.1
Quality control methods	7.1.2
Quality control flags definition	7.1.2
Archived data with chain of custody information and QA/QC flags	7.1.2
5-minute average data resolution	7.1.1
Means for disseminating information to local response agencies and SCAQMD	7.1, 7.4.1

b. Due to public comment time restraints we need additional time to provide more detail information requirements and request that there be a public meeting to supplement the table.

11. **Details of the proposed public notification system; and**

a. Our collaborative wishes to propose the following regarding public notification:

Types of Public Notification

Tier I Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate death (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 1 minute from detection.

Tier II Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate or delayed permanent adverse health effects (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 5 minutes from detection.

Tier III Equipment Failure or Malfunction, Power Failure, Weather Impact, Internet Outage etc.

No longer than 10 minutes from detection.

Tier IV The posting of new information such as Report Availability, Planned Maintenance, New Equipment Purchase, Public Tour etc.

No longer than 1 hour after availability.

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

b. Methods of Public Notification

Emergency (In order of priority)

a. Direct phone call to home or residence
b. Direct phone call to cell phone
c. Direct phone call to designated person
d. Direct phone call to work or location
e. Text message to cell phone
f. Community Door-to-Door
g. Audio Alarm
h. Mobile Vehicle Speaker Announcements
i. Police/Emergency Response vehicle Speaker Announcements

Non-Emergency (In order of priority)

a. Personal email
b. Listed social media
c. US postal mail
d. Door-to-Door drop-off

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

c. We want real time sampling, reporting and public notification based on one-minute interval collected data. Consistent with the intent of Rule 1180, refineries should be obligated to report data to the public based on <u>real time</u> standards, no greater than 1 min from detection.
d. Residents need to have the earliest possible warning to be able to safely evacuate in time and/or to prepare to shelter-in-place.

12. **Demonstration of independent oversight.**

    The Draft Plan failed to include an Independent Oversight Plan and identify an Independent 3rd Party Monitor.

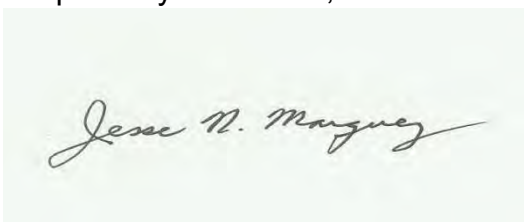
CFASE et al Public Comments regarding the South Coast AMD - Rule 1180 compliance to AB1647 (Muratsuchi) Petroleum Refineries: Air Monitoring Systems, October 8, 2017:

a. Rule1180 does not comply with AB1647 Section 42705.6 (a) (1) definition of. “Refinery-Related Community Air Monitoring System,” because the Draft Plan does not identify all categories of sensitive receptor locations near the refinery. As some example, there is a Child Care Center, Children, Senior Citizen Residents, Pregnant Women and Residents With Pre-Existing Health Conditions fenceline to the refinery.

b. Rule1180 does not comply with AB1647 Section 42705.6 (d) The district and the owner or operator of a petroleum refinery shall collect real-time data from the refinery-related community air monitoring system and the fence-line monitoring system and shall maintain records of that data. To the extent feasible, the data generated by these systems shall be provided to the public as quickly as possible in a publicly accessible format.

For any questions or information please send all correspondence or questions to me as principal contact regarding these public comments.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744
310-590-0177

Ricardo Pulido
Executive Director
Community Dreams
1601 N. Wilmington Blvd., Ste. B2
Wilmington, CA 90744
mr.rpulido@gmail.com
310-567-0748

Pastor Alfred Carrillo
Apostolic Faith Center
1510 E. Robidoux St.
Wilmington, CA 90744
alfredcarrillo@msn.com
310-940-6281

Magali Sanchez-Hall, MPH
Executive Director
EMERGE
913 East O Street
Wilmington, CA 90744
mssanchezhall7@gmail.com
646-436-0306

Chaplain Anthony Quezada
American Legion Post 6
1927 E. Plymouth St.
Long Beach, CA 90810
m.in.usa.aq@gmail.com
310-466-2724

Anabell Romero Chavez
Wilmington Improvement Network
Board Member
1239 Ronan Ave.
Wilmington, CA 90744
anab3ll310@yahoo.com
310-940-4515

Dr. John G. Miller, MD
San Pedro & Peninsula Homeowners Coalition
President
1479 Paseo Del Mar
San Pedro, CA 90731
igornla@cox.net
310-548-4420

Joe R. Gatlin
Vice President
NAACP
San Pedro-Wilmington Branch # 1069
225 S. Cabrillo Ave.
San Pedro, CA 90731
joergatlin45k@gmail.com
310-766-5399

Modesta Pulido
Chairperson
St. Philomena Social Justice Ministry
22106 Gulf Ave.
Carson, CA 90745
vdepulido@gmail.com
310-513-1178

Robina Suwol
Executive Director
California Safe Schools
P.O. Box 2756
Toluca Lake, CA 91610
robinasuwol@earthlink.net
818-261-7965

Jane Williams
Executive Director
California Communities Against Toxics
P.O. Box 845
Rosamond, CA 93560
dcapjane@aol.com
661-256-2101

Cynthia Babich
Executive Director
Del Amo Action Committee
4542 Irone Ave.
Rosamond, CA 93560
delamoactioncommittee@gmail.com
310-769-4813

Mitzi Shpak
Executive Director
Action Now
2062 Lewis Ave.
Altadena, CA 91001
msmshpak@gmail.com
626-825-9795

Joe Weistein
Chairman
Citizens About Responsible Planning (CARP)
Long Beach, CA
jweins113@hotmail.com

Coalition For A Safe Environment
California Kids IAQ
Community Dreams
EMERGE
American Legion Post 6
Wilmington Improvement Network
San Pedro & Peninsula Homeowners Coalition
NAACP- San Pedro-Wilmington Branch # 1069
Apostolic Faith Center
California Communities Against Toxics
California Safe Schools
Del Amo Action Committee
Action Now
St. Philomena Social Justice Ministry
Citizens About Responsible Plannng

January 11, 2019

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765
909-396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya
Program Supervisor
909-396-3157
opikelnaya@aqmd.gov

Rule1180@aqmd.gov

Re: Phillips 66 - Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan
Su: CFASE et al Public Comments Submission

Dear South Coast AQMD:

On behalf of the undersigned organizations we would like to submit our public comments on the Phillips 66 - Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan.

While we recognize that the plans were prepared in response with the South Coast AQMD (SCAQMD) Rule 1180 and AB 1647 we wish to state the following for the record:

1. It is our opinion that the Phillips 66 - Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan does not comply with Rule 1180, AB1647 and AB617.

2. We submit our public comments on this plan so as not to relinquish our rights and public comments regarding the inadequacies of the Draft Refinery Fenceline Air Monitoring Plan, Rule 1180 and Rule 1180 Fenceline Air Monitoring Guidelines.
3. That the SCAQMD did not adopt the majority of all requests and recommendations made by the Public, Disadvantaged Communities and Environmental Justice Communities regarding Rule 1180.
4. That the SCAQMD is aware of the adoption into law of AB617 which has additional legal requirements and will have new mandates for Fenceline Air Monitoring.
5. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent will during the AB617 Community Plan preparation, public meetings and public participation process will make new requests, recommendations and requirements that may exceed the SCAQMD Rule 1180.
6. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent formally request that the SCAQMD wait until the AB617 Community Plans have been completed so that all Fenceline Air Monitoring Requirements can be incorporated into the SCAQMD Rule 1180 Fenceline Air Monitoring Plans.
7. We request that the public have an opportunity to review and comment on the Final Plan.

CFASE et al Public Comments regarding compliance to the South Coast AMD - Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines, December 2017:

Key Objectives:

1. **Provide information about various air pollutant levels (i.e., determined by air pollutant concentration) measured in real-time in durations short enough to adequately address significant emissions changes from refinery operations;**

    a. The Draft Plan does not identify all types of refinery emissions categories and chemicals that are allowed such as in the SCAQMD issued Title V Permit and what is reported annually to SCAQMD and USEPA.
    b. The Draft Plan does not include current available refinery emissions data.
    c. The Draft Plan states that data will be averaged and displayed at 5-minutes intervals which, alone, is unacceptable. The data should be reported at 5 minute and in real time, at 1 minute intervals to provide sufficient time for the community to respond and for the refinery to mitigate 10 minute emission concentrations in accordance to the Acute Exposure Guideline Level (AEGL) as specified in Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017. We are aware of at least one system that is capable of averaging, reporting, and displaying data, in multiple intervals, simultaneously.
    d. The Draft Plan states that data will appear on the website within 10-minutes. This is unacceptable and not real time. Real time data should be uploaded at one-minute intervals.
    e. The Draft Plan states that data will be made available via rolling 24-hour trend of the five-minute data for each gas reported which is unacceptable. We want real time data and reporting every one-minute, displaying both one minute and 5 minute averages.

f. The Draft Plan fails to disclose how total VOC's will be calculated. Most of the refinery emissions are alkanes, therefore, TVOC should be defined as total alkanes and should be measured, accurately, using the estimated molecular weight, presented in combination with the Total Alkanes concentrations in parts per billion, as described Method EPA/600/R-09/136, and in the EPA Guidance Document Measurement of Emission from Produced Water Ponds, October, 2009, Appendix A. This will provide the most accurate measurement of release quantities
g. Real time, one-minute reporting to the public to provide critical alerts, preventing contaminants from entering the community in advance of reporting. For example, a wind speed of around 2m per second at time of an event, results in contaminated air reaching a distance of 120m. In 10min, that air will move a distance of 1,200m. With refineries located very close to densely populated areas, such risks and exposure to public health are not acceptable.
h. Shorter reporting intervals will minimize the possibility of data manipulation, unauthorized software program attribute changes, and inaccurate reporting to the public. All the reporting should be subject to spectral validation in real time to insure published data is accurate and precise as published. We are aware of at least one manufacturer whose monitoring equipment is capable of real time data collection, data analysis, quality control and reporting every one-minute

2. **Gather accurate air quality and meteorological data to identify both the time(s) and location(s) of various air pollutant levels near refinery operations and provide a comparison of these levels to other pollutant levels monitored in the Basin;**

a. The Draft Plan does not, and must, require the minimum detection level of ppb for each type of chemical or substance as prescribed in Table 5. Emergency Exposure Levels for Chemicals Emitted from California Refineries, Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017.
b. The Draft Plan failed to acknowledge that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances, wider dispersion and at further distances at lower ground levels thus resulting in increased public health impacts and increased risk exposure.

c. The Draft Plan states that a Mobile Air Monitoring System will be deployed in the event that the main Fence Line System goes off-line for longer than 24hrs is unacceptable. There is no information provided about the capabilities and equipment on the Mobile Air Monitoring System. The deployment after 24hrs. is unacceptable and should be deployed within one hour when not on-site and within 5 minutes if located on-site. Any back up system must comply with all features and specifications of fix installed units to maintain continuity and consistency of reported and displayed data. Tons of numerous deadly and toxic chemicals can be released in an hour and we must have an accurate accounting of what time, what type and the quantity of an emission was released. ConocoPhillips has denied in the past as to when an equipment breakdown started, when emissions began to be released and even the fact that there was more than one type of emission.

3. **Track long-term air pollutant levels, variations, and trends over time at or near the property boundaries of petroleum refineries and in nearby communities;**

a. The Draft Plan fails to require real-time monitoring 24/7/365.
b. The Draft Plan fails to require quality control of the real-time monitoring, data and equipment 24/7/365.
c. The Draft Plan fails to include any criteria for system availability for a 24/7/365 operation. We request a 90% availability uptime requirement. Availability will be calculated as the ratio between (100% absolute operation time, minus poor visibility conditions time, minus system idle time) divided by (100% absolute operation time). Availability criteria should be calculated and reported on a quarterly basis for every fenceline system. Availability should be evaluated quarterly and annually.
d. The Draft Plan fails to describe the Scalability of the equipment software. Will the database be able to handle the added data from all equipment over the long-term?
e. The Draft Plan fails to describe the Redundancy of the equipment software. Data must be replicated across multiple servers, or, stored in cloud-based IT backup and computing power system architecture to insure continuity of data in the event of a server going down.
f. The Draft Plan fails to describe the Secure encryption and other security features. While air monitoring data are not generally considered sensitive or confidential we want to ensure that the data is protected from hackers and intruders.
g. The Draft Plan fails disclose if equipment calibration will comply with an USEPA FEM Instrument and/or FRM instrument.
h. All instruments deployed must use standard operating procedures, including calibration and Quality Control in compliance with promulgated EPA methods. If there is a technology that has an official method, such as FTIR, only, for fenceline monitoring, this technology should follow the quality control specified in the method. If there is a fenceline technology, that can achieve detection limits low enough to replace instruments operating without a promulgated method, such as UV DOAS, such technology should be implemented. We are aware of at least one FTIR.
i. The Draft Plan fails to assure that the original raw database cannot be deleted or altered and the original maintained. Scripts can be developed to then pull data from the database (without altering the database itself) and process the raw data for quality control purposes, data display, etc.
j. There can be no long term data and trend analysis on short emissions of chemicals and substances. Short term releases can be a significant cause of public emergency visits.
k. CFASE conducted a Trend Analysis of ConocoPhillips Benzene Annual Emissions Reporting data to the SCAQMD from the years 2000-2015 which revealed that Benzene had increased yet the SCAQMD did not know and has done nothing to reduce this trend. The Draft Plan fails to include any requirements or penalties when a trend discloses an increase in emissions.
l. The Draft Plan fails to require the SCAQMD to post on-line all Flaring emission incidents information. For example the SCAQMD used to post on-line information on the number of Planned Flare Events vs Unplanned Flaring Events which has now been removed from their website. CFASE had discovered that the number of Unplanned Flaring Events had exceeded the number of Planned Flaring Events and that the emissions from Unplanned Flaring Events exceeded the annual reported emissions.

m. Monitoring equipment must remain operational as consistently as technology will allow. We are aware of at least one manufacturer whose monitoring equipment is capable of achieving a 90% availability uptime.

4. **Provide context to the data so that local communities can distinguish air quality in their location from other locations in the Basin and understand the potential health impacts associated with local air quality near petroleum refinery operations;**

a. The Draft Plan fails to acknowledge that specific chemicals and substances have different risk levels.
b. The Draft Plan fails to include specific chemical and substances public safety detection levels necessary to comply with all risk levels. Such as included in the OEHHA Chemical Database which includes, Cancer Risk, Air-Acute RELs,8-Hour RELs, Chronic REl, Safe Harbor Levels etc..
c. The Draft Plan does not state or assure that all detection limits will meet state and federal regulatory requirements. The Acrolein MDL is higher than the 1 hour REL threshold as defined by regulators. All targeted compounds should be measured based on MDLs (Minimum Detection Limits) which are less than the regulatory requirement, as published by the OEHHA. Need to be able to measure and report Acrolein MDL's based on the OEHHA regulatory requirement of less than 1.0(PPB), one hour acute measurement. Acrolein MDL criteria should be based on OEHHA 2017 thresholds. The public cannot be exposed to more than 1ppb for one hour.

The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero.

d. The Draft Plan fails to include specific information on the potential and actual public health impacts from exposure to specific chemicals and substances such as Reproductive, Cognitive, Neurological, Cardiovascular, Physical Development, Endocrine Disorders, Immune Death etc..
e. The Draft Plan fails to include specific information on the individual and cumulative impact from exposure to chemicals which are categorized as an immediately dangerous to life or health condition.
f. The Draft Plan fails to include specific information on where and how specific chemicals and substances are used in manufacturing and in products. Such as in plastic products, packaging, preservatives, detergents, dyes, resins, flavoring agents, solvents, pesticides, herbicides etc..
g. The Draft Plan fails to include specific information on how the public can be exposed such as through breathing inhalation and skin dermal absorption.
h. The Draft Plan fails to include specific information on how OEHHA developed Child Specific Reference Doses (chRDs) for seventy-eight chemical contaminants to be of greatest concern at school sites for causing adverse effects in children.
i. The Draft Plan fails to reference that NOAA Office of Response and Restoration and The National Institute of Occupational Safety and Health (NIOSH) defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or

immediate or delayed permanent adverse health effects or prevent escape from such an environment."

5. **Provide a notification system for communities near refineries when emissions exceed thresholds (e.g., RELs); and**

   a. The Draft Plan fails to include all chemical and substances RELs (Recommended Exposure Level) to allow the public to know that a refinery emission exceeds a threshold.
   b. The Draft Plan fails to include real time air monitoring equipment that can detect chemical and substances at ppm levels in one minute intervals.
   c. One-minute intervals are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

6. **Provide quarterly reports summarizing the measurements, data completeness, and quality assurance.**

   The Draft Plan fails to require a Root Cause Analysis to be included in the report for every exceedance of a California State or Federal Air Quality Standard and/or REL.

The Air Monitoring Plan Shall Include Detailed Information For The Following:

1. **An evaluation of routine emission sources at the refinery (e.g., utilizing remote sensing or other measurement techniques or modeling studies, such as those used for health risk assessments);**

   a. The Draft Plan fails to include a definition of routine emissions. The definition shall include all chemical and substance emissions identified in the Title V Permit and which are reported annually to the SCAQMD and US EPA.
   b. The Draft Plan does not include and address categories of chemicals and substances such as PAH's (Polycyclic Aromatic Hydrocarbons), POM's (Polycyclic Organic Matter), HAPs (Hazardous Air Pollutants)/TACs (Toxic Air Pollutants).
   c. The Draft Plan does not include a comprehensive list of all chemical's within a category such as VOC's.
   d. The Draft Plan fails to require that all chemicals and substances will be monitored, measured and reported.
   e. The Draft Plan fails to include a list of all equipment that will be used to monitor all chemical and substance emissions.

2. **An analysis of the distribution of operations and processes within the refinery to determine potential emission sources;**

   a. The Draft Plan Figure 2.1 is titled Emission Sources at Phillips 66 Wilmington Refinery, but does not identify any emission sources in the photo. According to information in the Draft Plan it states that the HARP2 Data Base identified 277 emission sources at this facility.
   b. The Draft Plan failed to require the identification of all emissions control equipment identified in the Title V Permit.

c. The Draft Plan failed to require the identification of all equipment malfunctions, breakdowns and power failures which have occurred in the past at the refinery. Information must also include past NOVs.

3. **An assessment of air pollutant distribution in surrounding communities (e.g., mobile surveys, gradient measurements, and/or modeling studies used for health risk assessments);**

a. The Seasonal Wind Roses illustrated in Figure 2.2 are not accurate for Wilmington because of the weather and wind influence of San Pedro Bay. The illustration is not acceptable because we need the wind and emissions distribution in real time by one-minute intervals, hourly and for 24hrs.. On one significant ConocoPhillips Flaring Event Day, a power failure resulted in Flaring for more than 24 hrs. releasing tons of emissions per hour.
b. CFASE has witnessed on one ConocoPhillips Flaring Event Day that wind direction at approximately 1:00pm was North by Northeast, the smoke emissions trail dispersion was more than 10 miles into the city of Carson passing the San Diego Freeway I-405 and at 6:00pm was South by Southeast into south Wilmington and the Port of Los Angeles.
c. Figures 2.3-2.27 Emissions information illustrated are not accurate for the reasons stated in a. and b.
d. One-minute real time reporting intervals, dispersion maps and illustrations are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

   NIOSH defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

e. Table 2.1 Column 4 title is Emissions Greater Than 5,000 Pounds Per Year is not acceptable because certain types of chemicals and substances are highly toxic in small quantities.
f. The Draft Plan failed to acknowledge and address that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances at lower ground levels and a further distribution thus resulting in increased public health impacts and increased risk exposure.

4. **A summary of fenceline air monitoring instruments and ancillary equipment that are proposed to continuously measure, monitor, record, and report air pollutant levels in real-time near the petroleum refinery facility perimeter (i.e., fenceline);**

The Draft Plan failed to include an Addendum which lists the specific equipment manufacturer, model number, software program and preprogramed attributes that the refinery plans to use that the public can review and comment.

5. **A summary of instrument specifications, detectable pollutants, minimum and maximum detection limits for all air monitoring instruments;**

   a. The Draft Plan fails to require all monitoring equipment to be capable of detecting emission limits as low as ppb, our requested detection level.
   b. The Draft Plan fails to disclose if monitoring equipment can report in real-time in one-minute intervals, our requested time interval.
   c. The Draft Plan fails to address if selected equipment will require heaters and fans due to weather temperature and humidity changes. Can the air monitoring equipment be impacted by insects, birds and mammals?
   d. The Draft Plan fails to address if selected equipment will require stabilizers and shock absorbers to accommodate earthquakes and ground movement. Does the facility exist on-top of a known earthquake fault, built on filled-in land and could it be impacted by land subsidence or liquid faction. Will sitting have to be inspected and adjusted after every earthquake or every year due to land movement? We request that all types of air monitoring equipment and supporting equipment be inspected from all potential negative impacts and be included in all Inspection Plan Checklists and Maintenance Plan Schedules.

6. **Proposed monitoring equipment siting and selected pathways (when applicable) for fenceline instruments, including the justification for selecting specific locations based on the assessments mentioned above;**

   a. The Draft Plan fails to include 100% fenceline air monitoring coverage without explanation. Any equipment line-of-sight obstacles should have been disclosed.
   b. ConocoPhillips did not provide nor reference any studies or evidence to prove that there are no nearby impacted residents or sensitive receptor populations to justify the need for not having 100% fenceline coverage.
   c. The Draft Plan fails to explain if the proposed or selected equipment can accommodate the proposed measuring distances. Weak signals and weather conditions can significantly affect the accuracy of data or even the ability to take measurements and collect data.
   d. Although some fenceline areas may not have fenceline or nearby residents they do expose the public to their toxic emissions. There is a significant youth sensitive receptor population nearby. To the South of the facility is a major youth recreation area for youth soccer and baseball called Field of Dreams. Hundreds of youth practice daily and thousands attend their almost weekly sports events. The Southeast borders the Harbor Freeway I-110 where tens-of-thousands of residents and workers travel daily. ConocoPhillips also has 1-2 Flare Smoke Stacks in the South section of the refinery.

7. **Operation and maintenance requirements for the proposed monitoring systems;**

   a. The Draft Plan failed to include an Addendum which included the detailed Operation and Maintenance Plan & Procedures that the public can review and comment.
   b. The Operation and Maintenance Plan & Procedures must be capable of supporting a

8. **An implementation schedule consistent with the requirements of Rule 1180;**

The Draft Plan failed to include an Implementation Plan and Schedule. We also request that it include assessments that we have identified in these public comments.

9. **Procedures for implementing quality assurance and quality control of data**;

a. The Draft Plan fails to state what EPA QA/QC procedures, methods or guidelines they will follow.
b. The Draft Plan fails to state what real time quality control on the measurement process will be used. Calculating the atmospheric levels (for each and every measurement) against the known atmospheric level can be used as a real time quality check of the measurement process. We request the use of constant atmospheric gases such as N_2O.
c. The Draft Plan fails to include a real time quality control process (for each and every measurement) based on an effective correlation, Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra method in order to minimize false positive and false negative measurements.
d. The Draft Plan fails to state that the public and AQMD will have access to all quality control data, formulas, validation and process information.
e. The Draft Plan fails to include a real time spectral validation process for each chemical and substance. The public and AQMD shall have access to all real time spectral validation checks on a real time basis.
f. The Draft Plan states that," all data exceeding a threshold will be qualified as preliminary subject to manual QA/QC review for quarterly report," is unacceptable. Data QA/QC should be in real time and within one-minute. Suspected release data should be reviewed and confirmed within minutes to protect the health and safety of community. The public cannot wait days or months for confirmed data.
g. The Draft Plan failed to include an Addendum which included the detailed Quality Assurance Project Pan (QAPP), Quality Control Plan & Standard Operating Procedures (SOPs) that the public can review and comment. The included outline is not adequate for a comprehensive assessment by the public.
h. The Draft Plan does not include a real time, validated data reporting procedure to public. The Draft Plan suggests monthly validation of data, not real time validation of reported data to the public which is unacceptable. The Draft Plan suggests conducting continuous real-time validation checks of measurements using two methods for quantification but fails to disclose the two methods will be used.
i. Fenceline monitoring systems are projected to generate enormous amount of data. We estimate that each refinery will generate over 1 million measurements per month, which cannot be done by a person or team of people. This means that there will be a need to deploy full automatic quality control procedures in order to be able to provide online validation for all real time reported data. The Public is entitled to receive real time checked and validated information which will generate minimum false negative / positive alarms.
j. We suggest 6 times Sigma (signal to noise level to be reported) to be the effective criteria for screening out measurements out of reported data. Need to apply real time quality control checks on the signal strength for each and every single measurement. Signal strength can be impacted by fog, rain, dirty lens, dirty

reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.

k. Effective criteria for screening out false negative and false positive measurements from reported data must be utilized. We are aware of at least one solution provider which can meet the following capabilities for effective real time Quality Control should procedures, which include:

1. Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra.
2. A Signal strength quality control procedure. Real time quality control checks on the signal strength for each and every single measurement must be applied. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
3. Real time quality control on the measurement process, utilizing known concentrations of an atmospheric gas, such as N_2O detection and real time comparison to the known atmospheric values.
4. Real time alarms when instruments are out of compliance.
5. Real time MDL calculation.
6. Regulator and Third Party Validator access to all quality control processes, such as real time spectral validations and control checks on a real time basis.

10. A web-based system for disseminating information collected by the fenceline air monitoring system;

a. We have attached an example of the information and format that we would like to see used in all Draft Plans.

Table 7-1: Crosswalk between Rule 1180 requirements and report sections where they are discussed

Rule 1180 Requirements for Plan	Addressed in Plan Section...
PUBLIC WEBSITE	
Web based system for disseminating information from fenceline monitors	7.2.2, 7.2.3, 7.2.4
Educational material	7.2.7
Description of pollutants	7.2.7
Description of background levels and context	7.2.7, 7.3
Hyperlinks to relevant sources of information	7.2.7
Means for the public to provide comments and feedback	7.2.6
Procedures to respond to comments and feedback from public	7.2.6
Provide relevant information for all downwind communities	7.3, 7.4.2
Quarterly data summary reports	7.5
Communication method for public notifications	7.4
Notifications about activities that could affect the fenceline air monitoring system	7.4.2
Notifications about the availability of periodic reports	7.4.3
Notifications about air quality threshold exceedances	7.4.1
DATA MANAGEMENT	
Procedures to upload data from the instruments to the website	7.1.1
Quality control methods	7.1.2
Quality control flags definition	7.1.2
Archived data with chain of custody information and QA/QC flags	7.1.2
5-minute average data resolution	7.1.1
Means for disseminating information to local response agencies and SCAQMD	7.1, 7.4.1

b. Due to public comment time restraints we need additional time to provide more detail information requirements and request that there be a public meeting to supplement the table.

11. **Details of the proposed public notification system; and**

a. Our collaborative wishes to propose the following regarding public notification:

Types of Public Notification

Tier I Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate death (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 1 minute from detection.

Tier II Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate or delayed permanent adverse health effects (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 5 minutes from detection.

Tier III Equipment Failure or Malfunction, Power Failure, Weather Impact, Internet Outage etc.

No longer than 10 minutes from detection.

Tier IV The posting of new information such as Report Availability, Planned Maintenance, New Equipment Purchase, Public Tour etc.

No longer than 1 hour after availability.

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

b. Methods of Public Notification

Emergency (In order of priority)

a. Direct phone call to home or residence
b. Direct phone call to cell phone
c. Direct phone call to designated person
d. Direct phone call to work or location
e. Text message to cell phone
f. Community Door-to-Door
g. Audio Alarm
h. Mobile Vehicle Speaker Announcements
i. Police/Emergency Response vehicle Speaker Announcements

Non-Emergency (In order of priority)

a. Personal email
b. Listed social media
c. US postal mail
d. Door-to-Door drop-off

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

c. We want real time sampling, reporting and public notification based on one-minute interval collected data. Consistent with the intent of Rule 1180, refineries should be obligated to report data to the public based on <u>real time</u> standards, no greater than 1 min from detection.

d. Residents need to have the earliest possible warning to be able to safely evacuate in time and/or to prepare to shelter-in-place.

12. **Demonstration of independent oversight.**

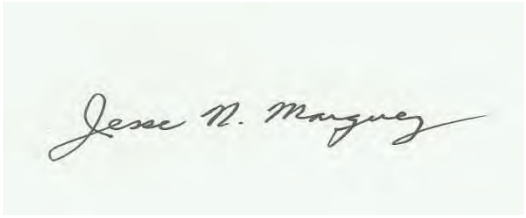
The Draft Plan failed to include an Independent Oversight Plan and identify an Independent 3rd Party Monitor.

CFASE et al Public Comments regarding the South Coast AMD - Rule 1180 compliance to AB1647 (Muratsuchi) Petroleum Refineries: Air Monitoring Systems, October 8, 2017:

a. Rule1180 does not comply with AB1647 Section 42705.6 (a) (1) definition of. "Refinery-Related Community Air Monitoring System," because the Draft Plan does not identify all categories of sensitive receptor locations near the refinery. As some example, there is a Child Care Center, Children, Senior Citizen Residents, Pregnant Women and Residents With Pre-Existing Health Conditions fenceline to the refinery.
b. Rule1180 does not comply with AB1647 Section 42705.6 (d) The district and the owner or operator of a petroleum refinery shall collect real-time data from the refinery-related community air monitoring system and the fence-line monitoring system and shall maintain records of that data. To the extent feasible, the data generated by these systems shall be provided to the public as quickly as possible in a publicly accessible format.

For any questions or information please send all correspondence or questions to me as principal contact regarding these public comments.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744
310-590-0177

Ricardo Pulido
Executive Director
Community Dreams
1601 N. Wilmington Blvd., Ste. B2
Wilmington, CA 90744
mr.rpulido@gmail.com
310-567-0748

Pastor Alfred Carrillo
Apostolic Faith Center
1510 E. Robidoux St.
Wilmington, CA 90744
alfredcarrillo@msn.com
310-940-6281

Magali Sanchez-Hall, MPH
Executive Director
EMERGE
913 East O Street
Wilmington, CA 90744
mssanchezhall7@gmail.com
646-436-0306

Chaplain Anthony Quezada
American Legion Post 6
1927 E. Plymouth St.
Long Beach, CA 90810
m.in.usa.aq@gmail.com
310-466-2724

Anabell Romero Chavez
Wilmington Improvement Network
Board Member
1239 Ronan Ave.
Wilmington, CA 90744
anab3ll310@yahoo.com
310-940-4515

Dr. John G. Miller, MD
San Pedro & Peninsula Homeowners Coalition
President
1479 Paseo Del Mar
San Pedro, CA 90731
igornla@cox.net
310-548-4420

Joe R. Gatlin
Vice President
NAACP
San Pedro-Wilmington Branch # 1069
225 S. Cabrillo Ave.
San Pedro, CA 90731
joergatlin45k@gmail.com
310-766-5399

Modesta Pulido
Chairperson
St. Philomena Social Justice Ministry
22106 Gulf Ave.
Carson, CA 90745
vdepulido@gmail.com
310-513-1178

Robina Suwol
Executive Director
California Safe Schools
P.O. Box 2756
Toluca Lake, CA 91610
robinasuwol@earthlink.net
818-261-7965

Jane Williams
Executive Director
California Communities Against Toxics
P.O. Box 845
Rosamond, CA 93560
dcapjane@aol.com
661-256-2101

Cynthia Babich
Executive Director
Del Amo Action Committee
4542 Irone Ave.
Rosamond, CA 93560
delamoactioncommittee@gmail.com
310-769-4813

Mitzi Shpak
Executive Director
Action Now
2062 Lewis Ave.
Altadena, CA 91001
msmshpak@gmail.com
626-825-9795

Joe Weistein
Chairman
Citizens About Responsible Planning (CARP)
Long Beach, CA
jweins113@hotmail.com

Coalition For A Safe Environment
California Kids IAQ
Community Dreams
EMERGE
American Legion Post 6
Wilmington Improvement Network
San Pedro & Peninsula Homeowners Coalition
NAACP- San Pedro-Wilmington Branch # 1069
California Communities Against Toxics
Apostolic Faith Center
California Safe Schools
Del Amo Action Committee
Action Now
St. Philomena Social Justice Ministry
Citizens About Responsible Planning

January 11, 2019

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765
909-396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya
Program Supervisor
909-396-3157
opikelnaya@aqmd.gov

Rule1180@aqmd.gov

Re: Tesoro LAR & MC - Carson & Wilmington Operations - Draft Refinery Fenceline Air Monitoring Plan
Su: CFASE et al Public Comments Submission

Dear South Coast AQMD:

On behalf of the undersigned organizations we would like to submit our public comments on the Tesoro LAR & MC - Carson & Wilmington - Draft Refinery Fenceline Air Monitoring Plan.

While we recognize that the plans were prepared in response with the South Coast AQMD (SCAQMD) Rule 1180 and AB 1647 we wish to state the following for the record:

1. It is our opinion that the Tesoro LAR & MC - Carson & Wilmington Operations - Draft Refinery Fenceline Air Monitoring Plan does not comply with Rule 1180, AB1647 and AB617.

2. We submit our public comments on this plan so as not to relinquish our rights and public comments regarding the inadequacies of the Draft Refinery Fenceline Air Monitoring Plan, Rule 1180 and Rule 1180 Fenceline Air Monitoring Guidelines.
3. That the SCAQMD did not adopt the majority of all requests and recommendations made by the Public, Disadvantaged Communities and Environmental Justice Communities regarding Rule 1180.
4. That the SCAQMD is aware of the adoption into law of AB617 which has additional legal requirements and will have new mandates for Fenceline Air Monitoring.
5. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent will during the AB617 Community Plan preparation, public meetings and public participation process will make new requests, recommendations and requirements that may exceed the SCAQMD Rule 1180.
6. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent formally request that the SCAQMD wait until the AB617 Community Plans have been completed so that all Fenceline Air Monitoring Requirements can be incorporated into the SCAQMD Rule 1180 Fenceline Air Monitoring Plans.
7. We request that the public have an opportunity to review and comment on the Final Plan.

CFASE et al Public Comments regarding compliance to the South Coast AMD - Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines, December 2017:

Key Objectives:

1. **Provide information about various air pollutant levels (i.e., determined by air pollutant concentration) measured in real-time in durations short enough to adequately address significant emissions changes from refinery operations;**

    a. The Draft Plan does not identify all types of refinery emissions categories and chemicals that are allowed such as in the SCAQMD issued Title V Permit and what is reported annually to SCAQMD and USEPA.
    b. The Draft Plan does not include current available refinery emissions data.
    c. The Draft Plan states that data will be averaged and displayed at 5-minutes intervals which, alone, is unacceptable. The data should be reported at 5 minute and in real time, at 1 minute intervals to provide sufficient time for the community to respond and for the refinery to mitigate 10 minute emission concentrations in accordance to the Acute Exposure Guideline Level (AEGL) as specified in Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017. We are aware of at least one system that is capable of averaging, reporting, and displaying data, in multiple intervals, simultaneously.
    d. The Draft Plan states that data will appear on the website within 10-minutes. This is unacceptable and not real time. True Real time data should be uploaded at one-minute intervals.
    e. The Draft Plan states that data will be made available via rolling 24-hour trend of the five-minute data for each gas reported which is unacceptable. We want real time data and reporting every one-minute, displaying both one minute and 5 minute averages.

f. The Draft Plan fails to disclose how total VOC's will be calculated. Most of the refinery emissions are alkanes, therefore, TVOC should be defined as total alkanes and should be measured, accurately, using the estimated molecular weight, presented in combination with the Total Alkanes concentrations in parts per billion, as described Method EPA/600/R-09/136, and in the EPA Guidance Document Measurement of Emission from Produced Water Ponds, October, 2009, Appendix A. This will provide the most accurate measurement of release quantities
g. Real time, one-minute reporting to the public to provide critical alerts, preventing contaminants from entering the community in advance of reporting. For example, a wind speed of around 2m per second at time of an event, results in contaminated air reaching a distance of 120m. In 10min, that air will move a distance of 1,200m. With refineries located very close to densely populated areas, such risks and exposure to public health are not acceptable.
h. Shorter reporting intervals will minimize the possibility of data manipulation, unauthorized software program attribute changes, and inaccurate reporting to the public. All the reporting should be subject to spectral validation in real time to insure published data is accurate and precise as published. We are aware of at least one manufacturer whose monitoring equipment is capable of real time data collection, data analysis, quality control and reporting every one-minute

2. **Gather accurate air quality and meteorological data to identify both the time(s) and location(s) of various air pollutant levels near refinery operations and provide a comparison of these levels to other pollutant levels monitored in the Basin;**

a. The Draft Plan does not, and must, require the minimum detection level of ppb for each type of chemical or substance.
b. The Draft Plan failed to acknowledge that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances, wider dispersion and at further distances at lower ground levels thus resulting in increased public health impacts and increased risk exposure.
c. The Draft Plan failed to acknowledge and address that Santa Ana Winds have a significant impact on refinery emissions dispersion.

3. **Track long-term air pollutant levels, variations, and trends over time at or near the property boundaries of petroleum refineries and in nearby communities;**

a. The Draft Plan fails to require real-time monitoring 24/7/365.
b. The Draft Plan fails to require quality control of the real-time monitoring, data and equipment 24/7/365.
c. The Draft Plan fails to include any criteria for system availability for a 24/7/365 operation. We request a 90% availability uptime requirement. Availability will be calculated as the ratio between (100% absolute operation time, minus poor visibility conditions time, minus system idle time) divided by (100% absolute operation time). Availability criteria should be calculated and reported on a quarterly basis for every fenceline system. Availability should be evaluated quarterly and annually.
d. The Draft Plan fails to describe the Scalability of the equipment software. Will the database be able to handle the added data from all equipment over the long-term?

e. The Draft Plan fails to describe the Redundancy of the equipment software. Data must be replicated across multiple servers, or, stored in cloud-based IT backup and computing power system architecture to insure continuity of data in the event of a server going down.
f. The Draft Plan fails to describe the Secure encryption and other security features. While air monitoring data are not generally considered sensitive or confidential we want to ensure that the data is protected from hackers and intruders.
g. The Draft Plan fails disclose if equipment calibration will comply with an USEPA FEM Instrument and/or FRM instrument.
h. All instruments deployed must use standard operating procedures, including calibration and Quality Control in compliance with promulgated EPA methods. If there is a technology that has an official method, such as FTIR, only, for fenceline monitoring, this technology should follow the quality control specified in the method. If there is a fenceline technology, that can achieve detection limits low enough to replace instruments operating without a promulgated method, such as UV DOAS, such technology should be implemented. We are aware of at least one FTIR.
i. The Draft Plan fails to assure that the original raw database cannot be deleted or altered and the original maintained. Scripts can be developed to then pull data from the database (without altering the database itself) and process the raw data for quality control purposes, data display, etc.
j. There can be no long term data and trend analysis on short emissions of chemicals and substances. Short term releases can be a significant cause of public emergency visits.
k. The Draft Plan fails to require the SCAQMD to post on-line all Flaring emission incidents information. For example the SCAQMD used to post on-line information on the number of Planned Flare Events vs Unplanned Flaring Events which has now been removed from their website. CFASE had discovered that the number of Unplanned Flaring Events had exceeded the number of Planned Flaring Events and that the emissions from Unplanned Flaring Events exceeded the annual reported emissions.
l. Monitoring equipment must remain operational as consistently as technology will allow. We are aware of at least one manufacturer whose monitoring equipment is capable of achieving a 90% availability uptime.

4. **Provide context to the data so that local communities can distinguish air quality in their location from other locations in the Basin and understand the potential health impacts associated with local air quality near petroleum refinery operations;**

a. The Draft Plan fails to acknowledge that specific chemicals and substances have different risk levels and mitigation measures.
b. The Draft Plan fails to include specific chemical and substances public safety detection levels necessary to comply with all risk levels. Such as included in the OEHHA Chemical Database which includes, Cancer Risk, Air-Acute RELs,8-Hour RELs, Chronic REl, Safe Harbor Levels etc..
c. The Draft Plan does not state or assure that all detection limits will meet state and federal regulatory requirements. The Acrolein MDL is higher than the 1 hour REL threshold as defined by regulators. All targeted compounds should be measured

based on MDLs (Minimum Detection Limits) which are less than the regulatory requirement, as published by the OEHHA. Need to be able to measure and report Acrolein MDL's based on the OEHHA regulatory requirement of less than 1.0(PPB), one hour acute measurement. Acrolein MDL criteria should be based on OEHHA 2017 thresholds. The public cannot be exposed to more than 1ppb for one hour.

The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero.

d. The Draft Plan fails to include specific information on the potential and actual public health impacts from exposure to specific chemicals and substances such as Reproductive, Cognitive, Neurological, Cardiovascular, Physical Development, Endocrine Disorders, Immune Death etc..
e. The Draft Plan fails to include specific information on the individual and cumulative impact from exposure to chemicals which are categorized as an immediately dangerous to life or health condition.
f. The Draft Plan fails to include specific information on where and how specific chemicals and substances are used in manufacturing and in products. Such as in plastic products, packaging, preservatives, detergents, dyes, resins, flavoring agents, solvents, pesticides, herbicides etc..
g. The Draft Plan fails to include specific information on how the public can be exposed such as through breathing inhalation and skin dermal absorption.
h. The Draft Plan fails to include specific information on how OEHHA developed Child Specific Reference Doses (chRDs) for seventy-eight chemical contaminants to be of greatest concern at school sites for causing adverse effects in children.
i. The Draft Plan fails to reference that NOAA Office of Response and Restoration and The National Institute of Occupational Safety and Health (NIOSH) defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."
j. The Draft Plan does not, and must, require the minimum detection level of ppb for each type of chemical or substance as prescribed in Table 5. Emergency Exposure Levels for Chemicals Emitted from California Refineries, Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017.

5. **Provide a notification system for communities near refineries when emissions exceed thresholds (e.g., RELs); and**

a. The Draft Plan fails to include all chemical and substances MDLs (Minimum Daily Level) and RELs (Recommended Exposure Level) to allow the public to know that a refinery emission or public safety health standard exceeds a threshold.
b. The Draft Plan fails to include real time air monitoring equipment that can detect chemical and substances at ppb levels in one minute intervals.
c. One-minute intervals are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

6. **Provide quarterly reports summarizing the measurements, data completeness, and quality assurance.**

    a. The Draft Plan fails to include information that highlights exceedance of air quality standard, public health standards, public safety requirements and mitigation taken.
    b. The Draft Plan fails to require a Root Cause Analysis to be included in the report for every exceedance of a California State or Federal Air Quality Standard, MDL and/or REL.

The Air Monitoring Plan Shall Include Detailed Information For The Following:

1. **An evaluation of routine emission sources at the refinery (e.g., utilizing remote sensing or other measurement techniques or modeling studies, such as those used for health risk assessments);**

    a. The Draft Plan fails to include a definition of routine emissions. The definition shall include all chemical and substance emissions identified in the Title V Permit and which are reported annually to the SCAQMD and US EPA.
    b. The Draft Plan does not include and address categories of chemicals and substances such as PAH's (Polycyclic Aromatic Hydrocarbons), POM's (Polycyclic Organic Matter), HAPs (Hazardous Air Pollutants)/TACs (Toxic Air Pollutants).
    c. The Draft Plan does not include a comprehensive list of all chemical's within a category such as VOC's.
    d. The Draft Plan fails to require that all chemicals and substances will be monitored, measured and reported. The limited short selected list of chemicals to be monitored is not acceptable.
    e. The Draft Plan fails to include a list of all air monitoring equipment that will be used to monitor all chemical and substance emissions.

2. **An analysis of the distribution of operations and processes within the refinery to determine potential emission sources;**

    a. The Draft Plan failed to require the identification of all emissions control equipment identified in the Title V Permit.
    b. The Draft Plan failed to require the identification of all equipment malfunctions, breakdowns and power failures which have occurred in the past at the refinery. Information must also include past NOVs.

3. **An assessment of air pollutant distribution in surrounding communities (e.g., mobile surveys, gradient measurements, and/or modeling studies used for health risk assessments);**

    a. One-minute real time reporting intervals, dispersion maps and illustrations are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition and those listed as HAPs.

        NIOSH defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is

likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

b. The Draft Plan failed to acknowledge and address that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances at lower ground levels and a further distribution thus resulting in increased public health impacts and increased risk exposure.

4. **A summary of fenceline air monitoring instruments and ancillary equipment that are proposed to continuously measure, monitor, record, and report air pollutant levels in real-time near the petroleum refinery facility perimeter (i.e., fenceline);**

a. The Draft Plan failed to include an Addendum which lists the specific equipment manufacturer, model number, software program and preprogramed attributes that the refinery plans to use so that the public can review and comment.
b. We want AQMD and the refinery to identify, select and use the most accurate air monitoring and reporting instruments. An open bid request that receives responses from manufacturers of less accurate and reporting air monitoring equipment and the lowest bidder is not acceptable.

5. **A summary of instrument specifications, detectable pollutants, minimum and maximum detection limits for all air monitoring instruments;**

a. The Draft Plan fails to require all monitoring equipment to be capable of detecting emission limits as low as ppb, our requested detection level.
b. The Draft Plan fails to disclose if monitoring equipment can report in true real-time in one-minute intervals, our requested time interval.
c. The Draft Plan fails to address if selected equipment will require heaters and fans due to weather temperature and humidity changes. Can the air monitoring equipment be impacted by insects, birds and mammals?
d. The Draft Plan fails to address if selected equipment will require stabilizers and shock absorbers to accommodate earthquakes and ground movement. Does the facility exist on-top of a known earthquake fault, built on filled-in land and could it be impacted by land subsidence or liquid faction. Will sitting have to be inspected and adjusted after every earthquake or every year due to land movement? Tesoro was built on top of a marsh area. We request that all types of air monitoring equipment and supporting equipment be inspected from all potential negative impacts and be included in all Inspection Plan Checklists and Maintenance Plan Schedules.

6. **Proposed monitoring equipment siting and selected pathways (when applicable) for fenceline instruments, including the justification for selecting specific locations based on the assessments mentioned above;**

a. The Draft Plan fails to include 100% fenceline air monitoring coverage without adequate justification. Any equipment line-of-sight obstacles, site constraints, multiple buildings, terrain and parking space issues should have warranted an alternative plan with alternative configurations to address these issues, including

adding more air monitoring instruments and/or raising the height of those instruments.

b. The Draft Plan fails to include the monitoring, measurement and reporting of 100% emissions and chemicals from all equipment sources throughout the facility including chemical delivery and shipment loading and unloading and not just the fenceline perimeters. Emissions from all refinery areas will travel and disperse with wind conditions and atmospheric inversions present.
c. Tesoro did not provide nor reference any studies or evidence to prove that there are no nearby impacted residents or sensitive receptor populations to justify the need for not having 100% fenceline coverage.
d. The Draft Plan fails to explain if the proposed or selected equipment can accommodate the proposed measuring path distances and maintain accuracy. Weak signals and weather conditions can significantly affect the accuracy of data or even the ability to take measurements and collect data. We request that preliminary tests be required for all proposed distances approaching the maximum measurement capability of an air monitoring instrument.
e. The Draft Plan fails to include GIS Coordinates and the Height Elevations at which equipment will be placed.
f. Although some fenceline areas may not have fenceline or nearby residents they do expose the public to their toxic emissions. To the North is the San Diego Freeway I-405 where tens-of-thousands of residents and workers travel daily. Tesoro also has 2-3 Flare Smoke Stacks in the North section of the refinery.

7. **Operation and maintenance requirements for the proposed monitoring systems;**

a. The Draft Plan failed to include an Addendum which included the detailed Operation and Maintenance Plan & Procedures that the public can review and comment.
b. The Operation and Maintenance Plan & Procedures must be capable of supporting a true real-time monitoring, measurement and reporting 24/7/365 and a 90% availability uptime requirement.
c. Air Monitoring Equipment that fails or malfunctions must be replaced within one-hour to protect public lives and health.

8. **An implementation schedule consistent with the requirements of Rule 1180;**

a. The Draft Plan failed to include an Implementation Plan and Schedule that includes an on-site preliminary assessments of air monitoring equipment and their maximum path distances accuracy.
b. The Draft Plan failed to include an Implementation Plan and Schedule that includes assessments that we have identified in these public comments.

9. **Procedures for implementing quality assurance and quality control of data**;

a. The Draft Plan fails to state what EPA QA/QC procedures, methods or guidelines they will follow. Will the QA Plan comply with the US EPA Guide to Writing Quality Assurance Project Plans for Ambient Air Monitoring Networks and 40 CFR Pt. 58 App. A QA Requirements.

b. The Draft Plan fails to state what real time quality control on the measurement process will be used. Calculating the atmospheric levels (for each and every measurement) against the known atmospheric level can be used as a real time quality check of the measurement process. We request the use of constant atmospheric gases such as N_2O.

c. The Draft Plan fails to include a real time quality control process (for each and every measurement) based on an effective correlation, Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra method in order to minimize false positive and false negative measurements.

d. The Draft Plan fails to state that the public and AQMD will have access to all quality control data, formulas, validation and process information.

e. The Draft Plan fails to include a real time spectral validation process for each chemical and substance. The public and AQMD shall have access to all real time spectral validation checks on a real time basis.

f. Suspected emissions release data should be reviewed and confirmed within minutes to protect the health and safety of community. The public cannot wait days or months for confirmed data.

g. The Draft Plan failed to include an Addendum which included the detailed Quality Assurance Project Pan (QAPP), Quality Control Plan & Standard Operating Procedures (SOPs) that the public can review and comment. The included outline is not adequate for a comprehensive assessment by the public.

h. The Draft Plan does not include a real time, validated data reporting procedure to public. The Draft Plan suggests monthly validation of data, not real time validation of reported data to the public which is unacceptable. The Draft Plan suggests conducting continuous real-time validation checks of measurements using two methods for quantification but fails to disclose the two methods will be used.

i. Fenceline monitoring systems are projected to generate enormous amount of data. We estimate that each refinery will generate over 1 million measurements per month, which cannot be done by a person or team of people. This means that there will be a need to deploy full automatic quality control procedures in order to be able to provide online validation for all real time reported data. The Public is entitled to receive real time checked and validated information which will generate minimum false negative / positive alarms.

j. We suggest 6 times Sigma (signal to noise level to be reported) to be the effective criteria for screening out measurements out of reported data. Need to apply real time quality control checks on the signal strength for each and every single measurement. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.

k. Effective criteria for screening out false negative and false positive measurements from reported data must be utilized. We are aware of at least one solution provider which can meet the following capabilities for effective real time Quality Control should procedures, which include:

1. Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra.
2. A Signal strength quality control procedure. Real time quality control checks on the signal strength for each and every single measurement must be applied. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging

equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.

3. Real time quality control on the measurement process, utilizing known concentrations of an atmospheric gas, such as N_2O detection and real time comparison to the known atmospheric values.
4. Real time alarms when air monitoring instruments are out of compliance.
5. Real time MDL calculation.
6. Regulator and Third Party Validator access to all quality control processes, such as real time spectral validations and control checks on a real time basis.

10. **A web-based system for disseminating information collected by the fenceline air monitoring system;**

a. We have attached an example of the information and format that we would like to see used in all Draft Plans.

Table 7-1: Crosswalk between Rule 1180 requirements and report sections where they are discussed

Rule 1180 Requirements for Plan	Addressed in Plan Section...
PUBLIC WEBSITE	
Web based system for disseminating information from fenceline monitors	7.2.2, 7.2.3, 7.2.4
Educational material	7.2.7
Description of pollutants	7.2.7
Description of background levels and context	7.2.7, 7.3
Hyperlinks to relevant sources of information	7.2.7
Means for the public to provide comments and feedback	7.2.6
Procedures to respond to comments and feedback from public	7.2.6
Provide relevant information for all downwind communities	7.3, 7.4.2
Quarterly data summary reports	7.5
Communication method for public notifications	7.4
Notifications about activities that could affect the fenceline air monitoring system	7.4.2
Notifications about the availability of periodic reports	7.4.3
Notifications about air quality threshold exceedances	7.4.1
DATA MANAGEMENT	
Procedures to upload data from the instruments to the website	7.1.1
Quality control methods	7.1.2
Quality control flags definition	7.1.2
Archived data with chain of custody information and QA/QC flags	7.1.2
5-minute average data resolution	7.1.1
Means for disseminating information to local response agencies and SCAQMD	7.1, 7.4.1

b. Due to public comment time restraints we need additional time to provide more detail information requirements and request that there be a public meeting to supplement the table.

11. Details of the proposed public notification system; and

a. Our collaborative wishes to propose the following regarding public notification:

Types of Public Notification

Tier I Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate death (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 1 minute from detection.

Tier II Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate or delayed permanent adverse health effects (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 5 minutes from detection.

Tier III Equipment Failure or Malfunction, Power Failure, Weather Impact, Internet Outage etc.

No longer than 10 minutes from detection.

Tier IV The posting of new information such as Report Availability, Planned Maintenance, New Equipment Purchase, Public Tour etc.

No longer than 1 hour after availability.

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

b. Methods of Public Notification

Emergency (In order of priority)

a. Direct phone call to home or residence
b. Direct phone call to cell phone
c. Direct phone call to designated person
d. Direct phone call to work or location
e. Text message to cell phone
f. Community Door-to-Door
g. Audio Alarm
h. Mobile Vehicle Speaker Announcements
i. Police/Emergency Response vehicle Speaker Announcements

Non-Emergency (In order of priority)

a. Personal email
b. Listed social media
c. US postal mail
d. Door-to-Door drop-off

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

c. We want real time sampling, reporting and public notification based on one-minute interval collected data. Consistent with the intent of Rule 1180, refineries should be obligated to report data to the public based on true real-time standards, no greater than 1 min from detection.
d. Residents need to have the earliest possible warning to be able to safely evacuate in time and/or to prepare to shelter-in-place.

12. **Demonstration of independent oversight.**

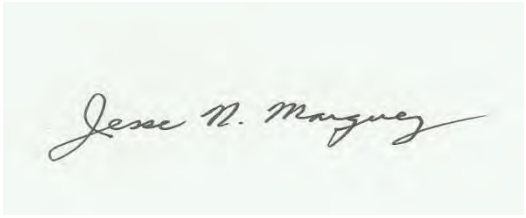
a. The Draft Plan failed to include an Independent Oversight Plan, Audit Details and identify an Independent 3rd Party Monitor.
b. We applaud Tesoro for the inclusion of 3rd Party certification of their meteorological stations.

CFASE et al Public Comments regarding the South Coast AMD - Rule 1180 compliance to AB1647 (Muratsuchi) Petroleum Refineries: Air Monitoring Systems, October 8, 2017:

a. Rule1180 does not comply with AB1647 Section 42705.6 (a) (1) definition of. “Refinery-Related Community Air Monitoring System,” because the Draft Plan does not identify all categories of sensitive receptor locations near the refinery. As some example, there is a Child Care Center, Children, Senior Citizen Residents, Pregnant Women and Residents With Pre-Existing Health Conditions fenceline to the refinery.
b. Rule1180 does not comply with AB1647 Section 42705.6 (d) The district and the owner or operator of a petroleum refinery shall collect real-time data from the refinery-related community air monitoring system and the fence-line monitoring system and shall maintain records of that data. To the extent feasible, the data generated by these systems shall be provided to the public as quickly as possible in a publicly accessible format.

For any questions or information please send all correspondence or questions to me as principal contact regarding these public comments.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744
310-590-0177

Ricardo Pulido
Executive Director
Community Dreams
1601 N. Wilmington Blvd., Ste. B2
Wilmington, CA 90744
mr.rpulido@gmail.com
310-567-0748

Pastor Alfred Carrillo
Apostolic Faith Center
1510 E. Robidoux St.
Wilmington, CA 90744
alfredcarrillo@msn.com
310-940-6281

Magali Sanchez-Hall, MPH
Executive Director
EMERGE
913 East O Street
Wilmington, CA 90744
mssanchezhall7@gmail.com
646-436-0306

Chaplain Anthony Quezada
American Legion Post 6
1927 E. Plymouth St.
Long Beach, CA 90810
m.in.usa.aq@gmail.com
310-466-2724

Anabell Romero Chavez
Wilmington Improvement Network
Board Member
1239 Ronan Ave.
Wilmington, CA 90744
anab3ll310@yahoo.com
310-940-4515

Dr. John G. Miller, MD
San Pedro & Peninsula Homeowners Coalition
President
1479 Paseo Del Mar
San Pedro, CA 90731
igornla@cox.net
310-548-4420

Joe R. Gatlin
Vice President
NAACP
San Pedro-Wilmington Branch # 1069
225 S. Cabrillo Ave.
San Pedro, CA 90731
joergatlin45k@gmail.com
310-766-5399

Modesta Pulido
Chairperson
St. Philomena Social Justice Ministry
22106 Gulf Ave.
Carson, CA 90745
vdepulido@gmail.com
310-513-1178

Robina Suwol
Executive Director
California Safe Schools
P.O. Box 2756
Toluca Lake, CA 91610
robinasuwol@earthlink.net
818-261-7965

Jane Williams
Executive Director
California Communities Against Toxics
P.O. Box 845
Rosamond, CA 93560
dcapjane@aol.com
661-256-2101

Cynthia Babich
Executive Director
Del Amo Action Committee
4542 Irone Ave.
Rosamond, CA 93560
delamoactioncommittee@gmail.com
310-769-4813

Mitzi Shpak
Executive Director
Action Now
2062 Lewis Ave.
Altadena, CA 91001
msmshpak@gmail.com
626-825-9795

Joe Weistein
Chairman
Citizens About Responsible Planning (CARP)
Long Beach, CA
jweins113@hotmail.com

Coalition For A Safe Environment
California Kids IAQ
Community Dreams
EMERGE
American Legion Post 6
Wilmington Improvement Network
San Pedro & Peninsula Homeowners Coalition
NAACP- San Pedro-Wilmington Branch # 1069
California Communities Against Toxics
Apostolic Faith Center
California Safe Schools
Del Amo Action Committee
Action Now
St. Philomena Social Justice Ministry
Citizens About Responsible Planning

January 11, 2019

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765
909-396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya
Program Supervisor
909-396-3157
opikelnaya@aqmd.gov

Rule1180@aqmd.gov

Re: Torrance Refinery - Draft Refinery Fenceline Air Monitoring Plan
Su: CFASE et al Public Comments Submission

Dear South Coast AQMD:

On behalf of the undersigned organizations we would like to submit our public comments on the Torrance Refinery - Draft Refinery Fenceline Air Monitoring Plan.

While we recognize that the plans were prepared in response with the South Coast AQMD (SCAQMD) Rule 1180 and AB 1647 we wish to state the following for the record:

1. It is our opinion that the Torrance Refinery - Draft Refinery Fenceline Air Monitoring Plan does not comply with Rule 1180, AB1647 and AB617.

2. We submit our public comments on this plan so as not to relinquish our rights and public comments regarding the inadequacies of the Draft Refinery Fenceline Air Monitoring Plan, Rule 1180 and Rule 1180 Fenceline Air Monitoring Guidelines.
3. That the SCAQMD did not adopt the majority of all requests and recommendations made by the Public, Disadvantaged Communities and Environmental Justice Communities regarding Rule 1180.
4. That the SCAQMD is aware of the adoption into law of AB617 which has additional legal requirements and will have new mandates for Fenceline Air Monitoring.
5. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent will during the AB617 Community Plan preparation, public meetings and public participation process will make new requests, recommendations and requirements that may exceed the SCAQMD Rule 1180.
6. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent formally request that the SCAQMD wait until the AB617 Community Plans have been completed so that all Fenceline Air Monitoring Requirements can be incorporated into the SCAQMD Rule 1180 Fenceline Air Monitoring Plans.
7. We request that the public have an opportunity to review and comment on the Final Plan.

CFASE et al Public Comments regarding compliance to the South Coast AMD - Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines, December 2017:

Key Objectives:

1. **Provide information about various air pollutant levels (i.e., determined by air pollutant concentration) measured in real-time in durations short enough to adequately address significant emissions changes from refinery operations;**

    a. The Draft Plan does not identify all types of refinery emissions categories and chemicals that are allowed such as in the SCAQMD issued Title V Permit and what is reported annually to SCAQMD and USEPA.
    b. The Draft Plan does not include current available refinery emissions data.
    c. The Draft Plan fails to state the data reporting time and intervals. The data should be reported at 5 minute and in real time, at 1 minute intervals to provide sufficient time for the community to respond and for the refinery to mitigate 10 minute emission concentrations in accordance to the Acute Exposure Guideline Level (AEGL) as specified in Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017. We are aware of at least one system that is capable of averaging, reporting, and displaying data, in multiple intervals, simultaneously.
    d. The Draft Plan fails to states how soon data will appear real-time on the website. Real time data should be uploaded at one-minute intervals.
    e. The Draft Plan fails to disclose how total VOC's will be calculated. Most of the refinery emissions are alkanes, therefore, TVOC should be defined as total alkanes and should be measured, accurately, using the estimated molecular weight, presented in combination with the Total Alkanes concentrations in parts per billion, as described Method EPA/600/R-09/136, and in the EPA Guidance Document Measurement of Emission from Produced Water Ponds, October, 2009, Appendix A. This will provide the most accurate measurement of release quantities

f. Real time, one-minute reporting to the public to provide critical alerts, preventing contaminants from entering the community in advance of reporting. For example, a wind speed of around 2m per second at time of an event, results in contaminated air reaching a distance of 120m. In 10min, that air will move a distance of 1,200m. With refineries located very close to densely populated areas, such risks and exposure to public health are not acceptable.
g. Shorter reporting intervals will minimize the possibility of data manipulation, unauthorized software program attribute changes, and inaccurate reporting to the public. All the reporting should be subject to spectral validation in real time to insure published data is accurate and precise as published. We are aware of at least one manufacturer whose monitoring equipment is capable of real time data collection, data analysis, quality control and reporting every one-minute

2. **Gather accurate air quality and meteorological data to identify both the time(s) and location(s) of various air pollutant levels near refinery operations and provide a comparison of these levels to other pollutant levels monitored in the Basin;**

a. The Draft Plan fails to acknowledge and address that Atmospheric Inversions occur on a regular basis in the San Pedro Bay South Bay area, which results in higher concentration levels of chemicals and substances, wider dispersion and at further distances at lower ground levels thus resulting in increased public health impacts and increased risk exposure.
b. The Draft Plan failed to acknowledge and address that Santa Ana Winds have a significant impact on refinery emissions dispersion.

3. **Track long-term air pollutant levels, variations, and trends over time at or near the property boundaries of petroleum refineries and in nearby communities;**

a. The Draft Plan fails to require true real-time monitoring 24/7/365.
b. The Draft Plan fails to require quality control of the real-time monitoring, data and equipment 24/7/365.
c. The Draft Plan fails to include any criteria for system availability for a 24/7/365 operation. We request a 90% availability uptime requirement. Availability will be calculated as the ratio between (100% absolute operation time, minus poor visibility conditions time, minus system idle time) divided by (100% absolute operation time). Availability criteria should be calculated and reported on a quarterly basis for every fenceline system. Availability should be evaluated quarterly and annually.
d. The Draft Plan fails to describe the Scalability of the equipment software. Will the database be able to handle the added data from all equipment over the long-term?
e. The Draft Plan fails to describe the Redundancy of the equipment software. Data must be replicated across multiple servers, or, stored in cloud-based IT backup and computing power system architecture to insure continuity of data in the event of a server going down.
f. The Draft Plan fails to describe the Secure encryption and other security features. While air monitoring data are not generally considered sensitive or confidential we want to ensure that the data is protected from hackers and intruders.
g. The Draft Plan fails disclose if equipment calibration will comply with an USEPA FEM Instrument and/or FRM instrument.

h. All instruments deployed must use standard operating procedures, including calibration and Quality Control in compliance with promulgated EPA methods. If there is a technology that has an official method, such as FTIR, only, for fenceline monitoring, this technology should follow the quality control specified in the method. If there is a fenceline technology, that can achieve detection limits low enough to replace instruments operating without a promulgated method, such as UV DOAS, such technology should be implemented.
i. The Draft Plan fails to assure that the original raw database cannot be deleted or altered and the original maintained. Scripts can be developed to then pull data from the database (without altering the database itself) and process the raw data for quality control purposes, data display, etc.
j. There can be no long term data and trend analysis on short emissions of chemicals and substances. Short term releases can be a significant cause of public emergency visits.
k. The Draft Plan fails to require the SCAQMD to post on-line all Flaring emission incidents information. For example the SCAQMD used to post on-line information on the number of Planned Flare Events vs Unplanned Flaring Events which has now been removed from their website. CFASE had discovered that the number of Unplanned Flaring Events had exceeded the number of Planned Flaring Events and that the emissions from Unplanned Flaring Events exceeded the annual reported emissions.
l. Monitoring equipment must remain operational as consistently as technology will allow. We are aware of at least one manufacturer whose monitoring equipment is capable of achieving a 90% availability uptime.
m. The proposed Tier Times for the replacement or substitution of alternative air monitoring equipment due to a failure or malfunction is not acceptable. Air Monitoring Equipment that fails or malfunctions must be replaced within one-hour to protect public lives and health.

4. **Provide context to the data so that local communities can distinguish air quality in their location from other locations in the Basin and understand the potential health impacts associated with local air quality near petroleum refinery operations;**

a. The Draft Plan fails to acknowledge that specific chemicals and substances have different risk levels and mitigation measures.
b. The Draft Plan fails to include specific chemical and substances public safety detection levels necessary to comply with all risk levels. Such as included in the OEHHA Chemical Database which includes, Cancer Risk, Air-Acute RELs,8-Hour RELs, Chronic REl, Safe Harbor Levels etc..
c. The Draft Plan does not state or assure that all detection limits will meet state and federal regulatory requirements. The Acrolein MDL is higher than the 1 hour REL threshold as defined by regulators. All targeted compounds should be measured based on MDLs (Minimum Detection Limits) which are less than the regulatory requirement, as published by the OEHHA. Need to be able to measure and report Acrolein MDL's based on the OEHHA regulatory requirement of less than 1.0(PPB), one hour acute measurement. Acrolein MDL criteria should be based on OEHHA 2017 thresholds. The public cannot be exposed to more than 1ppb for one hour.

The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero.

d. The Draft Plan fails to include specific information on the potential and actual public health impacts from exposure to specific chemicals and substances such as Reproductive, Cognitive, Neurological, Cardiovascular, Physical Development, Endocrine Disorders, Immune Death etc..
e. The Draft Plan fails to include specific information on the individual and cumulative impact from exposure to chemicals which are categorized as an immediately dangerous to life or health condition.
f. The Draft Plan fails to include specific information on where and how specific chemicals and substances are used in manufacturing and in products. Such as in plastic products, packaging, preservatives, detergents, dyes, resins, flavoring agents, solvents, pesticides, herbicides etc..
g. The Draft Plan fails to include specific information on how the public can be exposed such as through breathing inhalation and skin dermal absorption.
h. The Draft Plan fails to include specific information on how OEHHA developed Child Specific Reference Doses (chRDs) for seventy-eight chemical contaminants to be of greatest concern at school sites for causing adverse effects in children.
i. The Draft Plan fails to reference that NOAA Office of Response and Restoration and The National Institute of Occupational Safety and Health (NIOSH) defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."
j. The Draft Plan does not, and must, require the minimum detection level of ppb for each type of chemical or substance as prescribed in Table 5. Emergency Exposure Levels for Chemicals Emitted from California Refineries, Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017.
k. We applaud the refinery for its identification of Health-Based Air Quality Thresholds 7.3.1 by different governmental agencies.

5. **Provide a notification system for communities near refineries when emissions exceed thresholds (e.g., RELs); and**

a. The Draft Plan fails to include all chemical and substances MDLs (Minimum Daily Level) and RELs (Recommended Exposure Level) to allow the public to know that a refinery emission or public safety health standard exceeds a threshold.
b. The Draft Plan fails to include real time air monitoring equipment that can detect chemical and substances at ppb levels in one minute intervals.
c. One-minute intervals are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

6. **Provide quarterly reports summarizing the measurements, data completeness, and quality assurance.**

a. The Draft Plan fails to include information that highlights exceedance of air quality standard, public health standards, public safety requirements and mitigation taken.
b. The Draft Plan fails to require a Root Cause Analysis to be included in the report for every exceedance of a California State or Federal Air Quality Standard, MDL and/or REL.

The Air Monitoring Plan Shall Include Detailed Information For The Following:

1. **An evaluation of routine emission sources at the refinery (e.g., utilizing remote sensing or other measurement techniques or modeling studies, such as those used for health risk assessments);**

    a. The Draft Plan fails to include a definition of routine emissions. The definition shall include all chemical and substance emissions identified in the Title V Permit and which are reported annually to the SCAQMD and US EPA.
    b. The Draft Plan does not include and address categories of chemicals and substances such as POM's (Polycyclic Organic Matter).
    c. The Draft Plan does not include a comprehensive list of all chemical's within a category such as VOC's.
    d. The Draft Plan fails to require that all chemicals and substances will be monitored, measured and reported. The limited short selected list of chemicals to be monitored is not acceptable.
    e. The Draft Plan fails to include a list of all equipment that will be used to monitor all chemical and substance emissions.

2. **An analysis of the distribution of operations and processes within the refinery to determine potential emission sources;**

    a. The Draft Plan failed to require the identification of all emissions control equipment identified in the Title V Permit.
    b. The Draft Plan failed to require the identification of all equipment malfunctions, breakdowns and power failures which have occurred in the past at the refinery. Information must also include past NOVs.

3. **An assessment of air pollutant distribution in surrounding communities (e.g., mobile surveys, gradient measurements, and/or modeling studies used for health risk assessments);**

    a. One-minute real time reporting intervals, dispersion maps and illustrations are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

        NIOSH defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

b. The Draft Plan failed to acknowledge and address that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances at lower ground levels and a further distribution thus resulting in increased public health impacts and increased risk exposure.

4. **A summary of fenceline air monitoring instruments and ancillary equipment that are proposed to continuously measure, monitor, record, and report air pollutant levels in real-time near the petroleum refinery facility perimeter (i.e., fenceline);**

a. The Draft Plan failed to include an Addendum which lists the specific equipment manufacturer, model number, software program and preprogramed attributes that the refinery plans to use that the public can review and comment.
b. We want AQMD and the refinery to identify, select and use the most accurate air monitoring and reporting instruments. An open bid request that receives responses from manufacturers of less accurate and reporting air monitoring equipment and the lowest bidder is not acceptable.
c. We applaud the refinery in its inclusion of Fenceline Air Monitoring System Supplier Selection Criteria.

5. **A summary of instrument specifications, detectable pollutants, minimum and maximum detection limits for all air monitoring instruments;**

a. The Draft Plan fails to require all monitoring equipment to be capable of detecting emission limits as low as ppb, our requested detection level.
b. The Draft Plan fails to disclose if monitoring equipment can report in real-time in one-minute intervals, our requested time interval.
c. The Draft Plan fails to address if selected equipment will require heaters and fans due to weather temperature and humidity changes. Can the air monitoring equipment be impacted by insects, birds and mammals?
d. The Draft Plan fails to address if selected equipment will require stabilizers and shock absorbers to accommodate earthquakes and ground movement. Does the facility exist on-top of a known earthquake fault, built on filled-in land and could it be impacted by land subsidence or liquid faction. Will sitting have to be inspected and adjusted after every earthquake or every year due to land movement? We request that all types of air monitoring equipment and supporting equipment be inspected from all potential negative impacts and be included in all Inspection Plan Checklists and Maintenance Plan Schedules.

6. **Proposed monitoring equipment siting and selected pathways (when applicable) for fenceline instruments, including the justification for selecting specific locations based on the assessments mentioned above;**

a. The Draft Plan fails to include the monitoring, measurement and reporting of 100% emissions and chemicals from all equipment sources including chemical delivery and shipment loading and unloading throughout the facility and not just the fenceline perimeters. Emissions from all refinery areas will travel and disperse with wind conditions and atmospheric inversions present.

b. The Draft Plan fails to explain if the proposed or selected equipment can accommodate the proposed measuring path distances and maintain accuracy. Weak signals and weather conditions can significantly affect the accuracy of data or even the ability to take measurements and collect data. We request that preliminary tests be required for all proposed distances approaching the maximum measurement capability of an air monitoring instrument.

7. **Operation and maintenance requirements for the proposed monitoring systems;**

n. The Draft Plan failed to include an Addendum which included the detailed Operation and Maintenance Plan & Procedures that the public can review and comment.
o. The Operation and Maintenance Plan & Procedures must be capable of supporting a true real-time monitoring, measurement and reporting 24/7/365 and a 90% availability uptime requirement.
p. Air Monitoring Equipment that fails or malfunctions must be replaced within one-hour to protect public lives and health.

8. **An implementation schedule consistent with the requirements of Rule 1180;**

The Draft Plan failed to include an Implementation Plan and Schedule. We also request that it include assessments that we have identified in these public comments.

9. **Procedures for implementing quality assurance and quality control of data**;

a. The Draft Plan fails to state what EPA QA/QC procedures, methods or guidelines they will follow. Will the QA Plan comply with the US EPA Guide to Writing Quality Assurance Project Plans for Ambient Air Monitoring Networks and 40 CFR Pt. 58 App. A QA Requirements.
b. The Draft Plan fails to state what real time quality control on the measurement process will be used. Calculating the atmospheric levels (for each and every measurement) against the known atmospheric level can be used as a real time quality check of the measurement process. We request the use of constant atmospheric gases such as N_2O.
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g. The Draft Plan failed to include a Volume II which included the detailed Quality Assurance Project Pan (QAPP), Quality Control Plan & Standard Operating

Procedures (SOPs) that the public can review and comment. The included outline is not adequate for a comprehensive assessment by the public.

h. The Draft Plan does not include a real time, validated data reporting procedure to public. The Draft Plan suggests monthly validation of data, not real time validation of reported data to the public which is unacceptable. The Draft Plan suggests conducting continuous real-time validation checks of measurements using two methods for quantification but fails to disclose the two methods will be used.

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k. Effective criteria for screening out false negative and false positive measurements from reported data must be utilized. We are aware of at least one solution provider which can meet the following capabilities for effective real time Quality Control should procedures, which include:

1. Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra.
2. A Signal strength quality control procedure. Real time quality control checks on the signal strength for each and every single measurement must be applied. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
3. Real time quality control on the measurement process, utilizing known concentrations of an atmospheric gas, such as N_2O detection and real time comparison to the known atmospheric values.
4. Real time alarms when instruments are out of compliance.
5. Real time MDL calculation.
6. Regulator and Third Party Validator access to all quality control processes, such as real time spectral validations and control checks on a real time basis.

l. The proposal to develop values during system commissioning as outlined in Table 7-2 is unacceptable. We want to see proposed values that can be reviewed and assessed by the public and governmental agency regulators that show that they comply with all air quality and public health standards.

10. **A web-based system for disseminating information collected by the fenceline air monitoring system;**

a. We have attached an example of the information and format that we would like to see used in all Draft Plans.

Table 7-1: Crosswalk between Rule 1180 requirements and report sections where they are discussed

Rule 1180 Requirements for Plan	Addressed in Plan Section...
PUBLIC WEBSITE	
Web based system for disseminating information from fenceline monitors	7.2.2, 7.2.3, 7.2.4
Educational material	7.2.7
Description of pollutants	7.2.7
Description of background levels and context	7.2.7, 7.3
Hyperlinks to relevant sources of information	7.2.7
Means for the public to provide comments and feedback	7.2.6
Procedures to respond to comments and feedback from public	7.2.6
Provide relevant information for all downwind communities	7.3, 7.4.2
Quarterly data summary reports	7.5
Communication method for public notifications	7.4
Notifications about activities that could affect the fenceline air monitoring system	7.4.2
Notifications about the availability of periodic reports	7.4.3
Notifications about air quality threshold exceedances	7.4.1
DATA MANAGEMENT	
Procedures to upload data from the instruments to the website	7.1.1
Quality control methods	7.1.2
Quality control flags definition	7.1.2
Archived data with chain of custody information and QA/QC flags	7.1.2
5-minute average data resolution	7.1.1
Means for disseminating information to local response agencies and SCAQMD	7.1, 7.4.1

b. Due to public comment time restraints we need additional time to provide more detail information requirements and request that there be a public meeting to supplement the table.

11. **Details of the proposed public notification system; and**

a. Our collaborative wishes to propose the following regarding public notification:

Types of Public Notification

Tier I Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate death (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 1 minute from detection.

Tier II Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate or delayed permanent adverse health effects (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 5 minutes from detection.

Tier III Equipment Failure or Malfunction, Power Failure, Weather Impact, Internet Outage etc.

No longer than 10 minutes from detection.

Tier IV The posting of new information such as Report Availability, Planned Maintenance, New Equipment Purchase, Public Tour etc.

No longer than 1 hour after availability.

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

b. Methods of Public Notification

Emergency (In order of priority)

a. Direct phone call to home or residence
b. Direct phone call to cell phone
c. Direct phone call to designated person
d. Direct phone call to work or location
e. Text message to cell phone
f. Community Door-to-Door
g. Audio Alarm
h. Mobile Vehicle Speaker Announcements
i. Police/Emergency Response vehicle Speaker Announcements

Non-Emergency (In order of priority)

a. Personal email
b. Listed social media
c. US postal mail
d. Door-to-Door drop-off

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

c. We want real time sampling, reporting and public notification based on one-minute interval collected data. Consistent with the intent of Rule 1180, refineries should be obligated to report data to the public based on true real-time standards, no greater than 1 min from detection.

d. Residents need to have the earliest possible warning to be able to safely evacuate in time and/or to prepare to shelter-in-place.

12. **Demonstration of independent oversight.**

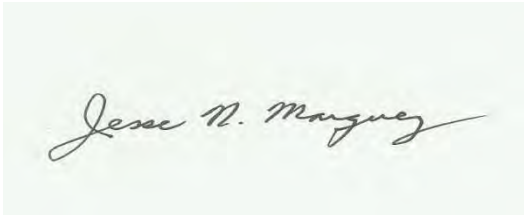
The Draft Plan failed to include an Independent Oversight Plan, Audit Details and identify an Independent 3rd Party Monitor.

CFASE et al Public Comments regarding the South Coast AMD - Rule 1180 compliance to AB1647 (Muratsuchi) Petroleum Refineries: Air Monitoring Systems, October 8, 2017:

a. Rule1180 does not comply with AB1647 Section 42705.6 (a) (1) definition of. “Refinery-Related Community Air Monitoring System,” because the Draft Plan does not identify all categories of sensitive receptor locations near the refinery. As some example, there is a Child Care Center, Children, Senior Citizen Residents, Pregnant Women and Residents With Pre-Existing Health Conditions fenceline to the refinery.
b. Rule1180 does not comply with AB1647 Section 42705.6 (d) The district and the owner or operator of a petroleum refinery shall collect real-time data from the refinery-related community air monitoring system and the fence-line monitoring system and shall maintain records of that data. To the extent feasible, the data generated by these systems shall be provided to the public as quickly as possible in a publicly accessible format.

For any questions or information please send all correspondence or questions to me as principal contact regarding these public comments.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744
310-590-0177

Ricardo Pulido
Executive Director
Community Dreams
1601 N. Wilmington Blvd., Ste. B2
Wilmington, CA 90744
mr.rpulido@gmail.com
310-567-0748

Pastor Alfred Carrillo
Apostolic Faith Center
1510 E. Robidoux St.
Wilmington, CA 90744
alfredcarrillo@msn.com
310-940-6281

Magali Sanchez-Hall, MPH
Executive Director
EMERGE
913 East O Street
Wilmington, CA 90744
mssanchezhall7@gmail.com
646-436-0306

Chaplain Anthony Quezada
American Legion Post 6
1927 E. Plymouth St.
Long Beach, CA 90810
m.in.usa.aq@gmail.com
310-466-2724

Anabell Romero Chavez
Wilmington Improvement Network
Board Member
1239 Ronan Ave.
Wilmington, CA 90744
anab3ll310@yahoo.com
310-940-4515

Dr. John G. Miller, MD
San Pedro & Peninsula Homeowners Coalition
President
1479 Paseo Del Mar
San Pedro, CA 90731
igornla@cox.net
310-548-4420

Joe R. Gatlin
Vice President
NAACP
San Pedro-Wilmington Branch # 1069
225 S. Cabrillo Ave.
San Pedro, CA 90731
joergatlin45k@gmail.com
310-766-5399

Modesta Pulido
Chairperson
St. Philomena Social Justice Ministry
22106 Gulf Ave.
Carson, CA 90745
vdepulido@gmail.com
310-513-1178

Robina Suwol
Executive Director
California Safe Schools
P.O. Box 2756
Toluca Lake, CA 91610
robinasuwol@earthlink.net
818-261-7965

Jane Williams
Executive Director
California Communities Against Toxics
P.O. Box 845
Rosamond, CA 93560
dcapjane@aol.com
661-256-2101

Cynthia Babich
Executive Director
Del Amo Action Committee
4542 Irone Ave.
Rosamond, CA 93560
delamoactioncommittee@gmail.com
310-769-4813

Mitzi Shpak
Executive Director
Action Now
2062 Lewis Ave.
Altadena, CA 91001
msmshpak@gmail.com
626-825-9795

Joe Weistein
Chairman
Citizens About Responsible Planning (CARP)
Long Beach, CA
jweins113@hotmail.com

Olga Pikelnaya

From: Oscar Espino-Padron <oespino-padron@earthjustice.org>
Sent: Friday, January 11, 2019 5:15 PM
To: Rule 1180
Cc: Andrea Polidori; Olga Pikelnaya
Subject: Rule 1180 Fenceline Air Monitoring Plan Comments
Attachments: 2019-0111 Phillips 66 and Tesoro Comments - final.pdf

Importance: High

VIA: ELECTRONIC MAIL ONLY

Dear Dr. Polidori,

Attached please find comments regarding the Rule 1180 draft fenceline air-monitoring plans prepared by Phillips 66 Wilmington, Phillips 66 Carson, and Tesoro Wilmington/Carson refineries.

Thank you,

Oscar Espino-Padron
Staff Attorney
Earthjustice California Office
800 Wilshire Blvd, Suite 1000
Los Angeles, California 90017
T: 415.217.2198
F: 415.217.2040
earthjustice.org
facebook.com/earthjustice
twitter.com/earthjustice

January 11, 2019

VIA: ELECTRONIC MAIL ONLY
(rule1180@aqmd.gov)

South Coast Air Quality Management District
Attn: Dr. Andrea Polidori, Atmospheric Measurements Manager
21865 Copley Drive
Diamond Bar, California 91765

Re: Comments Concerning Rule 1180 Fenceline Air Monitoring Plans for Phillips 66 Wilmington, Phillips 66 Carson, & Tesoro Carson/Wilmington Refineries

Dear Dr. Polidori:

The undersigned organizations provide these comments concerning the draft fenceline air-monitoring plans submitted by Phillips 66 Wilmington and Carson refineries (Phillips 66), and the Tesoro Carson and Wilmington Refineries (Tesoro). As detailed in this letter, there are several deficiencies in the proposed plans that require revisions prior to the South Coast Air Quality Management District's final approval. In their current form, these plans fail to comply with the explicit requirements of Rule 1180 and the District's Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines (Guidelines).[1]

As you know, the central purpose of fenceline monitoring efforts is to "reduce cancer risk and chronic health effects" borne by fenceline communities near petroleum refineries, in addition to providing important emissions data.[2] Every single year, petroleum refineries in the Basin release thousands of toxic, cancer-inducing air pollutants into nearby communities, including homes, hospitals, day-care centers, and schools. In 2017, for instance, Phillips 66 Wilmington released over 300,000 pounds of toxic air contaminants on-site, and Tesoro released over 700,000 pounds at its Carson location alone.[3] These harmful pollutants are in addition to emissions from the ports of Long Beach and Los Angeles and other industrial activities in the region that expose local residents to added health risks.

In addition to toxic air contaminants, petroleum refineries also spew obnoxious odors caused by hazardous substances like hydrogen sulfide and other chemicals that not only diminish people's quality of life but can also be life threatening. As described by a local Wilmington resident, on some days these odors are "so heavy that it's unbearable. You wake up because the smell is so strong—very, very strong, especially in the early morning."[4] Moreover, these refineries release significant amounts of criteria pollutants, such as

[1] SOUTH COAST AIR QUALITY MANAGEMENT DIST., *Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines* (Dec. 2017) [hereafter *Guidelines*]; Rule 1180: Refinery Fenceline and Community Air Monitoring.
[2] 80 Fed. Reg. 751177 (Dec. 1, 2015).
[3] *Toxics Release Inventory Program Reports*, U.S. ENVTL. PROTECTION AGENCY, https://iaspub.epa.gov/triexplorer/release_fac?p_view=COFA&trilib=TRIQ1&sort=_VIEW_&sort_fmt=1&state=06&county=06037&chemical=All+chemicals&industry=324&year=2017&tab_rpt=1&fld=RELLBY&fld=TSFDSP (last visited Jan. 11, 2019).
[4] Jim Morris, *'The Fear of Dying' Pervades Southern California's Oil-Polluted Enclaves*, PACIFIC STANDARD (Oct. 30, 2017), https://psmag.com/environment/southern-californias-oil-polluted-enclaves

nitrogen oxides that worsen ozone in the region—this diminished air quality exacerbates asthma conditions and undermines lung development in children.[5]

Undoubtedly, local residents have a significant stake in the adequate development and implementation of Rule 1180 air monitoring plans. For that reason, we want to express our serious disappointment with the District's decision to truncate the public's review of these plans. District staff made repeated assurances to community members that (1) the public would receive additional time beyond the minimum 14-day public comment and review period under Rule 1180; and (2) staff would schedule a public forum to review general findings prior to the comment period. Both of these guarantees are particularly important for community members to engage fully in the development of these plans.

In the end, the District did not fulfill its promises and instead released these draft plans before the holidays – with comments due on December 21 and 25 (Christmas Day) – and with no scheduled public presentation. Although the District provided a modest extension to January 11, 2019, only after repeated community-member requests, the District's reversal on past assurances is unacceptable and violates its guiding principles of environmental justice: the public has the right to be "informed" and "participate in the development and implementation of adequate environmental regulations in their communities."[6] The District's current approach to reviewing and finalizing these plans marginalizes community members by denying them the opportunity to be *informed* and *participate* fully in the implementation of Rule 1180.

The District can still make a mid-course correction. After revising these draft plans, the District should recirculate the final plans for an additional comment period prior to approval and schedule a public forum to present on these fenceline air-monitoring plans. In doing so, the public would receive a meaningful chance to review and ensure that monitoring systems adequately protect local communities by reducing harmful air pollutants and disclosing information about emissions from petroleum refineries.

*****

Rule 1180 requires petroleum refineries to provide "detailed information" in their fenceline air monitoring plans concerning a range of system criteria. Nevertheless, the draft plans submitted by Phillips 66 and Tesoro fail to meet this basic requirement.

Throughout review of these plans, the required information is either absent or vague, rather than sufficiently detailed—this limited analysis undermines transparency and the public's understanding of how these fenceline air-monitoring systems will function, the specific equipment refineries will ultimately select, adequacy of the quality-assurance project plan, among other important considerations.

As a result, the District should address the following deficiencies identified in each of these plans prior to final approval. The District should then recirculate updated monitoring plans for additional public

[5] *Health Effects of Ozone Pollution*, U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution (last visited Jan. 9, 2019).
[6] SOUTH COAST AIR QUALITY MANAGEMENT DIST., *Guiding Principles of Environmental Justice*, http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ej-guiding-principles (last visited Jan. 11, 2019).

review and comment, and host a public forum to discuss general findings. For the reasons detailed below, approval of these monitoring plans in their current form would violate Rule 1180.

(1) Spatial Coverage and Equipment Placement Deficiencies

Rule 1180 requires that fenceline air monitoring plans specify the placement of equipment to ensure adequate coverage to monitor air pollutants.[7] The Guidelines outline information air monitoring plans must provide that refineries should have considered in selecting the location of monitoring instruments and assessing fenceline coverage.[8] For instance, in determining fenceline air monitoring coverage and equipment placement, the plan must identify "sensitive receptors affected by the refinery operation[s]," detail "historical facility emission patterns and pollutant hotspots," and evaluate meteorological conditions, among other relevant considerations.[9] The proposed air monitoring plans submitted by these refineries fail to meet many of these information disclosure and evaluation requirements.

In several instances, these plans (1) fail to present any analysis whatsoever or sufficient detail to confirm that the placement of monitoring equipment and fenceline coverage are adequate to accurately track emissions; and/or (2) do not provide substantial evidence to support their decision to exclude particular coverage or equipment from the monitoring system.

a. Plans Require Additional Fenceline Air Monitoring Coverage

i. <u>The southeast area of the Phillips 66 Wilmington refinery requires air-monitoring coverage, based on dispersion modeling provided in the proposed plan.</u>

Phillips 66 Wilmington inexplicably leaves the southeast fenceline area without coverage, despite admitting that based on its own modeling, "the majority of emissions are transported from the refinery in either a North Westerly direction or *South Easterly* direction."[10] In fact, the refinery's downwind emissions impact figures confirm a southeast direction for several pollutants, including annual average concentrations for ammonia, benzene, cyclohexane, and propylene.[11] Ignoring the data, the proposed spatial coverage inexplicably leaves a significant opening at the southeast corner of the refinery.

The plan does not explain the reasons for excluding this area from monitoring. In purporting to evaluate each "sector of the refinery," Phillips 66 Wilmington entirely ignores the southeast area of the refinery deemed to have a large amount of emissions.[12] The plan neglects to provide any explanation about why coverage on the southeast part of the facility's fenceline would be infeasible or unnecessary under the circumstances and the modeling.

Finally, to the extent Phillips 66 Wilmington contends that no sensitive receptors or communities would experience impacts in that portion of the refinery, that argument does not justify the lack of

[7] Rule 1180(d)(2)(B).
[8] *Guidelines*, *supra* note 1, at 13.
[9] *Id*. at 2, 14.
[10] Phillips 66 Wilmington Refinery, *Regulation 1180 Air Monitoring Plan*, 40 (Nov 26, 2018) [hereafter *Phillips 66 Wilmington Plan*] (emphasis added); see also, *id*. at 12 (showing downwind emissions impacts).
[11] *Id*. at 26-28, 35.
[12] *Id*. at 40.

monitoring. The purpose of Rule 1180 is not only to provide the public with data about air pollution impacts, but also to assist in measuring "routine emissions," "detecting leaks," and documenting "unplanned releases from refinery equipment and other sources of refinery-related emissions."[13] The significant spatial coverage gap in the southeast portion of the refinery undermines the goals of this rule.

For these reasons, the District should revise the plan to require the installation of additional monitoring stations in the southeast area of the refinery.

ii. Phillips 66 Wilmington fails to explain the reasons for the coverage gap between Path 3A and Path 2B in the west side of the refinery.

Under the Guidelines, petroleum refineries must explain their "rationale" for fenceline coverage decisions.[14] Phillip 66 Wilmington's draft plan does not clarify the reasons for monitoring coverage gap on the western portion of the facility between Path 3A and Path 2B. Close inspection confirms that area of the refinery does not appear to have any structural or other impediments that make coverage infeasible.

Consequently, the District should revise the plan to close this coverage gap at the refinery or require that Phillips 66 Wilmington explain in detail the reasons for this opening. If topography or structural concerns exist, the refinery should explore potential solutions, including additional monitoring equipment to close that opening and reduce any excessive path distances at the same time.

iii. Tesoro must provide fenceline coverage between paths 6 and 5, and paths 8 and 9 at the Carson site, and the southern and northern portions of the Wilmington site.

In its plan, Tesoro asserts that "path 5 cannot be extended to the south-west fenceline" because of "site constraints," including "multiple buildings" and "terrain."[15] Tesoro does not provide sufficient detail to justify these conclusions – instead, the plan should catalog or list the specific buildings between paths 5 and 6 that make installation of a monitoring system infeasible. Moreover, the plan does not consider alternatives, including the installation of a separate fenceline monitoring system in that segment—not merely an extension of path 5 using an open-path reflector—to overcome any elevation differences that might make extending path 5 infeasible.

Next, Tesoro does not provide any reasons for its failure to combine or extend paths 8 and 9 at the Carson site. The plan also incorrectly states that the gap between paths 7 and 8 at the Carson site cannot close due to a "parking space" that does not appear to exist in that area.[16] Moreover, Tesoro relies on general assertions about these portions of the refinery, citing "roadway constraints."[17] Tesoro should be required to elaborate on any structural and road obstacles to closing fenceline gaps at the refinery. For instance, the plan should note the location of parking areas and explain the types of vehicles that enter this area, the

[13] *Guidelines*, *supra* note 1, at 1. Additionally, there are logistics-related businesses adjacent to that area of the refinery. The workers at those locations should receive the same protections and information offered to residential neighborhoods around the refinery.
[14] *Id*. at 14.
[15] Tesoro Los Angeles Refining & Marking Company LLC, *SCAQMD Rule 1180 Fenceline Monitoring Plan*, 25 (Dec. 11, 2018) [hereafter *Tesoro Plan*].
[16] *Id*.
[17] *Id*.

height of particular structures and their distances from the property boundary and the specific roadway obstacles for each of these spatial gaps that make coverage impossible.

Finally, the southern and northern portions of the Wilmington site should install monitoring equipment. Tesoro does not provide its rationale for excluding the northern portion of the Wilmington site from monitoring, despite calm winds moving in that direction.[18] Indeed, calm winds reduce dispersion, and are associated with higher concentrations of pollutants. Although Kinder Morgan has operations next to the northwest corner of the site, Tesoro did not consider alternative monitoring configurations to track emissions from operations in that portion of the refinery.

The southern portion of the Wilmington site must receive fenceline coverage, despite the "FCCU shutdown."[19] Other equipment and sources exists in that portion of the refinery, and fenceline monitoring would assist in measuring routine emissions, leaks, and unplanned releases from that equipment.[20] Additionally, Tesoro cannot generally assert that it is "highly unlikely" and that "many obstructions" exist that prevent fenceline monitoring in that area of the refinery.[21] As detailed above, Tesoro should be required to identify and provide specific details regarding these "obstructions," and explain why alternative fenceline configurations covering the southern part of the Wilmington site are infeasible. Indeed, if true, tent monitoring, as discussed during District workshops, or point monitors could be installed.

b. Hydrogen Sulfide and/or Black Carbon Point Source Monitoring Revisions

Both Tesoro and the Phillips 66 refineries propose monitoring of hydrogen sulfide (H2S) and black carbon using point monitors.[22] These monitoring systems are fixed-point, capturing emissions information from particular fenceline areas of the refineries. Additional monitoring equipment is necessary to capture H2S and black carbon data accurately and protect communities near these refineries.

The health impacts associated with these pollutants makes adequate tracking of these emissions critical. For instance, black carbon "is associated with health problems including respiratory and cardiovascular disease, cancer, and even birth defects."[23] Similarly, H2S has a range of health effects on the respiratory and nervous system even at low concentrations, including "headaches, poor memory, tiredness, and balance problems."[24]

i. <u>Phillips 66 Wilmington and Carson refineries should install additional H2S and black carbon point monitors to measure emissions accurately.</u>

Currently, Phillips 66 Wilmington proposes to install monitors in three areas of the refinery, specifically the northeast, southeast, and southwest.[25] However, as demonstrated by the refinery's

[18] *Id*. at 23.
[19] *Id*. at 25.
[20] *Guidelines*, *supra* note 1, at 1.
[21] *Tesoro Plan*, *supra* note 15, at 25.
[22] *Phillips 66 Wilmington Plan*, *supra* note 10, at 41-42; *Tesoro Plan*, *supra* note 15, at 6-7.
[23] *Black Carbon Research*, U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/air-research/black-carbon-research (last visited Jan. 9, 2019)
[24] *Hydrogen Sulfide Fact Sheet*, AGENCY FOR TOXIC SUBSTANCES AND DISEASE REG. (Dec. 2016), https://www.epa.gov/sites/production/files/2017-12/documents/appendix_e-atsdr_h2s_factsheet.pdf
[25] *Phillips 66 Wilmington Plan*, *supra* note 10, at 41.

dispersion modeling, H2S and black carbon emissions are also present in significant concentrations towards the central part of the refinery's eastside, with residential homes and other sensitive receptors neighboring that location.[26] Nonetheless, the proposed monitoring plan does not provide H2S and black carbon monitoring stations at that location. Phillips 66 Wilmington must revise the plan to include monitoring of these emissions at that site.

Similarly, Phillips 66 Carson's dispersion modeling highlights communities to the west as impacted by refinery emissions,[27] but the center portion of the western side of the refinery is lacking H2S and black carbon monitoring.[28] Indeed, only 3 corners of the site include monitors.[29] When using point monitors, good coverage is essential.

ii. Tesoro should provide additional H2S and black carbon monitoring stations on paths 4, 5, and 7, based on emissions modeling in the plan.

Under Tesoro's current draft plan, H2S monitors will exist at paths 1, 3, 6, 11, and 12.[30] However, Tesoro's dispersion modeling supports the need for additional H2S monitors at paths 4, 5, and 7. In particular, the one-hour and five-year concentrations of H2S appear at or near these paths.[31] Moreover, the predominant wind direction would also move H2S emissions in the direction of the paths 4 and 5 locations, toward sensitive receptors near that area.[32]

Notably, Tesoro does not provide any dispersion modeling for concentrations of black carbon using diesel particulate matter as a proxy. Instead, Tesoro asserts that black carbon "measurements are also highly correlated with polycyclic aromatic hydrocarbon" amounts, and as a result, provides for black carbon monitoring equipment alongside H2S monitoring instruments.[33] Tesoro should be required to provide diesel particulate matter modeling to assess the concentrations of black carbon at the site and confirm appropriate monitoring locations. However, if the District accepts Tesoro's approach for measuring black carbon, paths 4, 5, and 7 should also include supplementary black carbon monitoring.

c. Distance of Monitoring Paths Are Excessive and/or Unexplained

The Guidelines require that facilities specify "the distance necessary to accurately measure emissions."[34] Monitoring path distances are important because excessive lengths can undermine a monitoring equipment's capacity to provide quality data. For instance, UV-DOAS instruments with "[l]ong

[26] *Id*. at 21 (showing maximum hourly hydrogen sulfide concentrations at about 3737500/381000); *id*. at 33 (showing annual hydrogen sulfide emissions concentrations); see also, *id*. at 17 (showing maximum hourly diesel particulate matter).
[27] Phillips 66 Carson Refinery, *Regulation 1180 Air Monitoring Plan*, 40 (Nov 25, 2018) [hereinafter *Phillips 66 Carson Plan*].
[28] *Id*. at 41.
[29] *Id.* at 39.
[30] *Tesoro Plan*, *supra* note 15, at 23.
[31] *Id.* at C-11, C-27 (Appendix B) (hydrogen sulfide 1-hour and 5-year concentrations).
[32] *Id*. at 23.
[33] *Id*. at 28.
[34] *Guidelines*, *supra* note 1, at 14.

path lengths can cause complications when analyzing results."[35] The typical path length for a UV-DOAS system is 500 meters to reduce interferences.[36] Similarly, FTIR systems have "limited range" and generally have a maximum path length of about 400 to 500 meters.[37] Indeed, the public identified this problem during the District workshop process in 2017, and it should have already been corrected in these plans.

i. Phillips 66 refineries must provide additional details regarding the adequacy of the proposed path distances, including actual measurement units for each path.

The proposed path distances in Phillips 66's Wilmington plan are presumably in meters but lack an actual unit of measurement.[38] Nonetheless, the proposed monitoring stations appear to provide for significant path distances of between 600 and 700 meters, which would be too long for some FTIR and UV-DOAS equipment.[39] The monitoring plan provides these distances without (1) an explanation about whether the proposed path distances would yield accurate measurements of emissions at the fenceline; (2) details about how exactly Phillips 66 can propose these path distances when it has not selected "final equipment" for the fenceline monitoring program; and (3) information about how these path distances impact the lower and upper detection limits the plan provides.[40] Similarly, Phillips 66 Carson's plan includes path lengths up to 700 (presumably meters), which are also provided without justification for the long path lengths.[41]

These excessive path distances would undermine the accuracy of the monitoring systems. Phillips 66 Wilmington and Carson must address these monitoring path deficiencies and provide substantial evidence and analysis to support the proposed path distances. In addition, the District should consider whether supplementary monitoring equipment stations are necessary to reduce path distances and increase accuracy.

ii. Tesoro fails to provide detailed information supporting the distances for paths 1, 3, 6, 10, and 13 that are excessive and likely to cause interferences.

The monitoring path distances for several areas of Tesoro's plan are significantly higher than the typical 500 meters path lengths for UV-DOAS and FTIR equipment – indeed, Tesoro's own illustrations explaining open-path instruments note a path distance of about 500 meters.[42] Under Tesoro's plan, for instance, paths 1 and 3 would be 555 meters in length, and paths 6, 10, and 13 would be about 600 meters long. Yet, Tesoro does not provide any detailed information justifying these path lengths and confirming that accuracy would remain high.

Finally, similar to Phillips 66, Tesoro does not explain how it determined these path distances, given that it has not selected specific equipment. As Tesoro admits "[a]ctual detection limits will depend

[35] U.S. ENVTL. PROTECTION AGENCY, *EPA Handbook: Optical Remote Sensing for Measurement and Monitoring of Emissions Flux*, 26 (Dec. 2011) (Section 1.6) [hereafter *EPA Handbook*], https://www3.epa.gov/ttnemc01/guidlnd/gd-052.pdf.
[36] *Id*. at 26.
[37] *Id*. at 25.
[38] *Phillips 66 Wilmington Plan*, *supra* note 10, at 41-42.
[39] *Id*.
[40] *Id*. at 39, 48.
[41] *Phillips 66 Carson Plan*, *supra* note 27, at 40.
[42] *Tesoro Plan*, *supra* note 15, at 32.

on atmospheric conditions and the *specific instrument brand used*."[43] Consequently, Tesoro's selected path lengths are arbitrary and premature. Tesoro must revise the proposed plan, after selecting specific instruments.

d. Location of Sensitive Receptors and/or Equipment Coordinates Absent

Rule 1180 fenceline air-monitoring plans must provide "GIS coordinates" of equipment locations and the "[e]levations at which equipment will be placed."[44] In addition, the plans must detail the sensitive receptors near the refinery.[45] Importantly, this information is necessary to assess the adequacy of sampling locations, including whether the refinery should consider alternatives.

i. Phillips 66 refineries do not provide details about the location and height of monitoring stations, and fails to map the sensitive receptors near the refineries.

The air monitoring plans do not provide the exact coordinates of monitoring stations and heights, instead they generally state the "height of monitoring platforms or reflectors placed on existing structures will be determined based on minimizing the possibility of beam blockage."[46] Phillips 66 Wilmington and Carson are required to detail the exact location and height of all monitoring stations and reflectors – without this information, the District and public cannot assess the adequacy of the proposed air-monitoring networks.

Moreover, the refineries do not identify sensitive receptors in the area, including schools, day care centers, hospitals, clinics, nursing homes, and recreation areas, as required by the Guidelines.[47] Instead, for example, Phillips 66 Wilmington refers generally to the "community" near different areas of the refinery.[48] The refineries must identify the sensitive receptors around the facilities on a map and their distance from the placement of monitoring equipment. Identifying these receptors is important to determine particular sites that should receive notification of emissions exceedances and to assess whether the placement of monitoring equipment is suitable to track emissions traveling in the direction of these receptors.

ii. Tesoro must explain its reasoning for the selection of skid locations and provide their coordinates in the proposed plan.

Under Appendix B, Tesoro presents a map of skid locations corresponding with the information in Table 7 of its proposed monitoring plan.[49] However, the exact location of each of these skids is unclear from the map. For this reason, Tesoro must provide coordinates for this equipment.

Additionally, the skid locations appear to be inconsistent with the corresponding monitoring path numbers. For instance, skids G, H, and I are on the northern portion of the Carson site, according to Tesoro's

[43] *Id*. at 30 (emphasis added); see also, *id*. at 45 (Tesoro has not finalized "vendor and instrument selection").
[44] *Guidelines*, *supra* note 1, at 4, 12.
[45] *Id*. at 4, 13.
[46] *Phillips 66 Wilmington Plan*, *supra* note 10, at 41; *Phillips 66 Carson Plan*, *supra* note 27, at 38.
[47] *Guidelines*, *supra* note 1, at 13.
[48] *Phillips 66 Wilmington Plan*, *supra* note 10, at 40.
[49] *Tesoro Plan*, *supra* note 15, at 24 (Table 7 providing summary of paths, elevations, and selected instrumentation); *id*. at B-2 (Appendix B).

map.[50] These skids correspond to paths number 10, 11, 12, and 13 that are on the Wilmington site to the south. Further, skid A appears in the southern portion of the Carson site, but corresponds to paths 1 and 2 located in the northern area of the site.[51] Tesoro must revise its plan to provide more information about the selection of these skid locations.

e. Impacts of Calm Days, Non-prevailing Wind Direction, or Other Conditions Causing Deteriorating Air Quality in all Surrounding Refinery Areas Inadequately Addressed

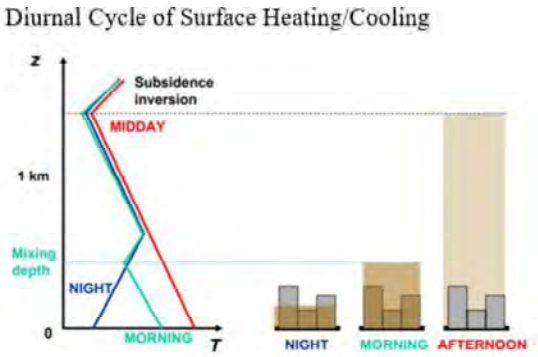
In determining spatial coverage and equipment site selection, the Guidelines require refineries to consider a range of meteorological conditions that may "significantly affect the concentration of air pollutants in a region," including wind directions, temperature fluctuations, cloud coverage variations, among other factors.[52] Indeed, the District notes that "[w]ind can be the most critical meteorological element" that can allow pollutants to "build up and meander in *any* direction."[53] Accordingly, the Guidelines provide for an assortment of wind measurements.[54] Despite this requirement, Tesoro's air monitoring plan fails to consider an adequate range of wind and other atmospheric conditions that can impact the direction of refinery air emissions, including poor dispersion due to very low winds and stagnation.

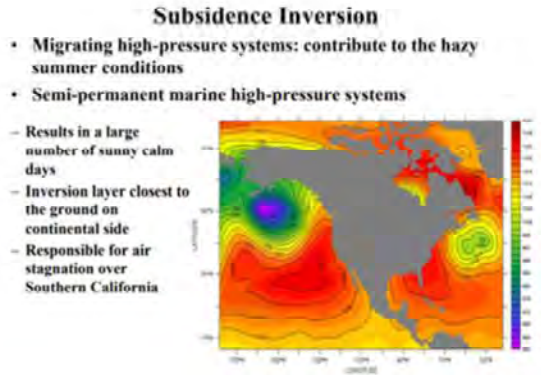
Instead, Tesoro's plan focuses on sensitive receptors in the direction of *prevailing winds* determined under specific, limited conditions.[55] The plan confirms this approach under the Sensitive Receptor section, where Tesoro states: "[b]ased on the *dominant wind directions and sensitive receptors* in residential areas, *the north and eastern fencelines are important areas to monitor.*"[56] Tesoro then lists schools and other sensitive receptors that are in these identified predominant wind directions.[57] While these are certainly important areas to monitor, Tesoro provides limited attention and analysis of emission impacts on other areas surrounding the refinery, specifically the west and south. Given the lack of detail on many aspects of the proposed monitoring, as noted in throughout this comment letter, we have serious concerns with this approach.

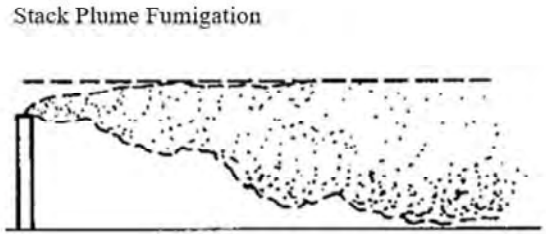
Unfortunately, neighborhood schools and people living in the western and southern portions of the Tesoro refinery cannot count on typical prevailing winds or atmospheric conditions as reliable protection from exposure to harmful pollutants. As the District knows, many exceptions to these average conditions exist—for instance, the Basin regularly experiences wind changes, inversions, coastal fumigation, building downwashes, diurnal changes in mixing height, among many other fluctuations. For reference, a few examples of such conditions are shown graphically below, including plume fanning, plume fumigation,

[50] *Id*. at B-2 (Appendix B).
[51] *Id*.
[52] *Guidelines*, *supra* note 1, at 14.
[53] *Id*.
[54] *Tesoro Plan*, *supra* note 15, at B-2 (Appendix B).
[55] See, e.g., *id*. at 11 (selected annual wind roses).
[56] *Id*. at 12.
[57] *Id*. at 13.

lower mixing layers close to houses at night, and inversions that create general air stagnation, keeping pollutants in neighborhoods in all directions of a refinery:[58]







The point is not to belabor specialized air modeling – rather, the District must recognize that refineries (1) cannot rely solely on air modeling; and (2) cannot assume it can already be known exactly what neighbors will experience impacts. In fact, the District understands first-hand the unreliability of air emissions modeling, emissions factors, and other estimation methods; for example, through the Fluxsense study, the District learned of drastically higher refinery benzene emissions than those in its own inventory. The inventory is frequently based on emissions factors, just as air modeling is also based on many *assumptions*.

Consequently, Tesoro's plan needs to consider a range of meteorological conditions, describe impacts on schools and sensitive receptors to the west and south of the refinery, and detail how the plan will track emissions and protect neighbors and sensitive receptors in non-prevailing wind directions. The point of Rule 1180 is to *measure* pollutants and neighborhood impacts in *all directions* surrounding the refineries. Tesoro's current fenceline air monitoring plan fails to meet this objective.

Lastly, in their proposed plans, the Phillips 66 refineries purport to use air modeling to design the fenceline air monitoring system, although it is unclear whether that was the decisive factor.[59] Phillips 66 Wilmington, for example, states neighbors or schools present "outside of the predominant wind directions

[58] *Atmospheric Air Pollutant Dispersion*, UNIV. OF WASHINGTON, http://courses.washington.edu/cee490/PlumeD4.pdf (last visited Jan. 11, 2019).
[59] *Phillips 66 Wilmington Plan*, *supra* note 10, at 9, 40; *Phillips 66 Carson Plan*, *supra* note 27, at 38.

of the refinery," would receive monitoring, which is the more health-protective approach.[60] However, similar to Tesoro, the Phillips 66 plans must describe in detail any difference in the treatment of neighbors not in the prevailing wind direction (or where modeling results assert lower pollution impacts). Monitoring should fully protect neighbors in all directions surrounding the refineries, and monitor fully for non-average wind directions and weather conditions.

e. Benzene Emissions Data Appears to be Outdated for Tesoro, Phillips 66 Wilmington, and Phillips 66 Carson, Including for Other Refineries Submitting Plans

The Guidelines require that monitoring plans "[d]escribe historical facility emission patterns and pollutant hotspots," in assessing spatial coverage.[61] This analysis requires review of several factors, including "[o]n-site location of operations and processes" and "[o]n-site location of emissions sources and level of emissions."[62] These assessments require accurate emissions data. However, it appears the emissions data for benzene (and VOCs in general) are grossly underestimated for Tesoro and both Phillips 66 refineries. The District must require the use of updated emissions data reporting for these refineries, and for all other refineries submitting monitoring plans.

As you know, the District carried out a special joint study of oil refinery emissions with Swedish scientists, published in 2017, i.e. the Fluxsense study. This study found that on average, petroleum oil refinery benzene emissions in the Basin were 34 times what was reported to the District inventory.[63] On average, refinery VOC emissions were about 6 times the inventory.[64]

The study also reviewed benzene emissions at the Tesoro Carson and Phillips 66 refineries. According to the Fluxsense study, Tesoro Carson benzene emissions were 43 times higher.[65] Unfortunately, the study did not list benzene emissions for Tesoro Wilmington. Phillips 66 Carson and Wilmington benzene emissions were 33 to 202 times higher.[66] The Fluxsense study also reported that the higher benzene and VOC emissions found were likely due to refinery storage tanks.

Nonetheless, Tesoro's plan states that its air modeling used 2015 AB2588 emissions profile data for toxic air contaminants (or TACs), which pre-dates the updated information from the in-depth Fluxsense study.[67] It is unclear whether this is the same data shown in emissions Table 4.[68] Although Tesoro claims that it considered the Fluxsense study in selecting monitoring sites, the plan fails to provide further information or analysis about how this study was taken into account.[69]

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[60] *Phillips 66 Wilmington Plan*, *supra* note 10, at 40.
[61] *Guidelines*, *supra* note 1, at 4.
[62] *Id*.
[63] Johan Mellqvist, *Emission Measurements of VOCs, NO2 and SO2 from the Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Optical Remote Sensing Methods*, 2-5 (April 11, 2017), https://www.courthousenews.com/wp-content/uploads/2017/06/FluxSense-Study.pdf
[64] *Id*.
[65] *Id*.
[66] *Id*.
[67] *Tesoro Plan*, *supra* note 15, at 17.
[68] *Id*. at 16.
[69] See, e.g. *id*. at 4, 21.

Both Phillips 66 refinery plans completely leave out current emission levels, although the plans state that benzene emissions are less than 5,000 pounds at each site.[70] Again, there is no indication that the plans considered the updated information from the Fluxsense study for benzene (or for VOCs in general).

Accurate reporting of this information is required in these plans. To the extent these plans used inaccurate data to prioritize where to focus monitoring or related systems, it is essential to update this data to reflect the past underreporting of benzene and VOCs. For example, the data could indicate a need to increase monitoring around storage tanks, related pipelines, and other fugitive emissions sources. The plans should specifically evaluate the effectiveness of the fenceline monitoring plans in detecting benzene and VOCs from such sources that were detected at higher levels in the Fluxsense study.

(2) Fenceline Air Monitoring Equipment Selection, Operation, and Management Deficiencies

Rule 1180 requires that refineries actually select particular fenceline air monitoring equipment. After identifying this equipment, the refinery must then provide the District and public with specific operation and maintenance details, and develop a quality assurance project plan.[71] Additionally, refineries must explain the exclusion of any compounds of interest from monitoring.[72] The draft plans from the Phillips 66 refineries and Tesoro fail to satisfy many of these straightforward requirements.

a. Selection of Particular Air Monitoring Equipment Omitted

Rule 1180 mandates that refineries provide "detailed information" about the specific "equipment to be used" to monitor emissions at the fenceline.[73] Instead, both Phillips 66 refineries and Tesoro provide the District and public with a survey of the general monitoring technology these refineries plan to implement at the facility. Without selecting specific equipment, these plans inappropriately rely on general assumptions.

The failure to identify particular equipment undermined the presentation of relevant information. For instance, Phillips 66 Wilmington delayed development of a quality assurance project plan and standard operating procedures until "final equipment is selected for the fence-line program."[74] Likewise, Tesoro notes that "actual pollution detection limits will depend" and "adjustments to the operation plans may be needed based on the *brand of instruments that are ultimately selected*."[75] The District and public can only speculate about what equipment these refineries will ultimately select and how these instruments will impact the monitoring plans.

For these reasons, the District must require that the refineries to select particular equipment and revise these draft plans. The selection of this equipment will inform detection limits, path lengths, maintenance tasks, and assist in finalizing the quality assurance and standard operating procedure plans, as required by Rule 1180.

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[70] *Phillips 66 Wilmington Plan*, *supra* note 10, at 13; *Phillips 66 Carson Plan*, *supra* note 27, at 13.
[71] *Guidelines*, *supra* note 1, at 4; see also, Rule 1180(d)(2)(A), (D), (E).
[72] *Guidelines*, *supra* note 1, at 4.
[73] Rule 1180(d)(2)(A).
[74] *Phillips 66 Wilmington Plan*, *supra* note 10, at 48; see also, *Phillips 66 Carson Plan*, *supra* note 27, at 46.
[75] *Tesoro Plan*, *supra* note 15, at 30, 34 (emphasis added).

b. Fenceline Air Monitoring Plans Exclude Emissions of Interest

Fenceline monitoring plans are required to track a range of criteria pollutants, volatile organic compounds, and other chemicals "at or near the property boundary of the petroleum refinery."[76] Further, in developing these monitoring plans, the Guidelines instruct refineries to consider additional pollutants that might be of interest if annual emissions are significant.[77]

i. Phillips 66 Wilmington and Carson improperly dismiss NOx and SOx from fenceline monitoring, in violation of the explicit requirements under Rule 1180.

Rule 1180 requires that refinery air monitoring plans consider equipment to track NOx and SOx criteria pollutants at the *fenceline*.[78] Disregarding this requirement, Phillips 66 Wilmington proposes no monitoring of NOx and SOx, simply stating that "[c]ontinuous emission monitors measure NOx emissions from heaters and boilers stacks, SOx emissions from boilers stacks."[79] Indeed, both Phillips 66 refineries impermissibly treat NOx and SOx in the same manner. Moreover, the refineries do not provide dispersion modeling for these pollutants to assess their onsite concentrations and direction past the fenceline.

Phillips 66 Wilmington and Carson entirely ignore the purpose of Rule 1180, which aims to provide monitoring of pollutants at the fenceline, not just from particular equipment sources. In addition to heaters and boilers, several other equipment at refineries are sources of NOx and/or SOx emissions that flow past the fenceline, including gas turbines, coke calciners, thermal oxidizers and incinerators, auxiliary internal combustion engines, and fluid catalytic cracking units. Indeed, because the refineries did not provide a detailed description of their operations and processes – in violation of Rule 1180 and the Guidelines – it is not possible for the public to determine the variety of other sources of NOx and SOx at these sites.[80]

For these reasons, Phillips 66 Wilmington and Carson must (1) model concentrations and dispersions of NOx and SOx emissions from the facilities; (2) implement monitoring at the fenceline to track these emissions; and (3) describe operations and processes to understand potential sources.

ii. Tesoro did not consider several pollutants of interest at the refinery for monitoring, despite large emission quantities.

A central goal of Rule 1180 is to "inform refinery operators and the public about air pollution impacts to nearby communities from refinery operations."[81] It is about information gathering and disclosure. For that reason, the Guidelines state that "if certain annual emissions exceed 10,000 lbs/year," the refinery should consider those pollutants for monitoring.[82]

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[76] Rule 1180(d)(2)(A).
[77] *Guidelines*, *supra* note 1, at 6.
[78] Rule 1180 at 7 (Table 1).
[79] *Phillips 66 Wilmington Plan*, *supra* note 10, at 39; see also, *Phillips 66 Carson Plan*, *supra* note 27, at 37.
[80] *Guidelines*, *supra* note 1, at 2 (noting plan must describe "operations and processes within the refinery to determine potential emission sources").
[81] *Id*. at 1.
[82] *Id*. at 6.

Despite this instruction, Tesoro did not examine several other pollutant emissions at or around this threshold at the refinery for monitoring. For instance, in 2015 alone, the Carson site released about 31,000 pounds of methanol, which is a hazardous air pollutant that can cause birth defects.[83] Nevertheless, the plan does not discuss or consider this pollutant for monitoring, among others the refinery emits in large quantities.

In fact, the proposed fenceline equipment can measure many of these pollutants, including methanol.[84] Tesoro would be able to track and provide this information without investing in additional instruments. Consequently, the District should require a revised plan detailing the reasons for not providing monitoring data regarding other significant pollutants at the refinery.

c. Refinery Locations Require Installation of Fans and Heaters, Other Measures

The Guidelines require that refineries consider weather effects on equipment and measures to address possible interferences. In particular, the Guidelines note that "[d]ue to the high prevalence of marine fog in the areas where the Basin refineries are located, heaters and fans may be required to keep the instrument optics and reflector mirrors free of moisture to maximize data recovery."[85] Importantly, these measures are necessary when using open-path UV-DOAS and FTIR instruments, which are susceptible to interferences from high humidity that can cause fog accumulation on the equipment.[86]

The plans submitted by the Phillips 66 Wilmington and Carson refineries fail to consider the need for heaters and fans for fenceline equipment. Similarly, Tesoro's plan fails to adequately analyze the installation of heaters on some reflectors but not others.[87] Additionally, the plans do not adequately discuss the weather conditions near the facility and their potential impact on the monitoring equipment. Given that these refineries are in a coastal area, the plans must provide for mitigation measures, including heaters and fans. These measures are essential to eliminate or reduce instrument interference caused by high humidity and fog moisture that are common in the region.[88]

d. Inadequate Equipment Maintenance and Failure Planning

The Guidelines require that fenceline monitoring plans describe the "maintenance activities necessary to maintain proper performance of the fenceline air monitoring equipment and plan that deals

[83] SOUTH COAST AIR QUALITY MANAGEMENT DIST., *Annual Emissions Reporting for Tesoro Refining* (2015), http://www3.aqmd.gov/webappl/fim/prog/emission.aspx?fac_id=174655; see also, *Chemicals Known to the State to Cause Cancer or Reproductive Toxicity*, CAL. OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT (Nov. 23, 2018), https://oehha.ca.gov/media/downloads/proposition-65//p65list112318.pdf.
[84] See, e.g., *EPA Handbook*, *supra* note 35, at 10 (Section 2.1) (listing species FTIR equipment can measure, including methanol).
[85] *Guidelines*, *supra* note 1, at 15.
[86] *EPA Handbook*, *supra* note 35, at 37 (Section 2.3); *id*. at 5 (Section 2.1).
[87] *Tesoro Plan*, *supra* note 15, at 24.
[88] For instance, Los Angeles ranks in the top 10 major cities with the highest afternoon humidity. CURRENT RESULTS: WEATHER AND SCIENCE FACTS, *Most Humid Cities in the United States*, https://www.currentresults.com/Weather-Extremes/US/most-humid-cities.php (last visited Jan. 9, 2019).

with equipment failures."[89] This information is necessary to ensure that refineries continuously capture quality, real-time data without interruptions.

i. Phillips 66 Wilmington and Carson do not provide information concerning the required maintenance to sustain proper equipment performance.

Both Phillips 66 Wilmington and Carson monitoring plans lack detailed information about equipment routine maintenance, including "technical audits, data verification and validation, and data quality assessment."[90] Nor do the plans confirm whether the refineries will keep replacement or repair parts onsite to minimize downtime. Instead, for example, Phillips 66 Wilmington simply states that it will provide this information in the future, as part of a quality assurance plan subject to "a third-party auditing process that will be reviewed by SCAQMD."[91] This approach deviates from the requirement that "air monitoring plan[s] *shall* include detailed information" regarding "maintenance requirements for the proposed monitoring systems."[92] This omission undermines accountability and public review.

Under these draft plans, the public does not receive particulars about general maintenance requirements, and will not have an opportunity to comment on any future maintenance measures. Adequate maintenance measures are important to ensure that monitoring systems capture accurate information. In fact, monitoring technology, such as UV-DOAS, can be particularly susceptible to measurement interferences from dust accumulation, requiring routine cleaning and maintenance procedures to ensure accuracy.[93]

As a result, both Phillips 66 refineries must identify the maintenance procedures for the equipment they plan to use. The District cannot approve the monitoring plans until the refineries provide this information, as required by Rule 1180.

ii. Tesoro neglects to provide detailed information about backup protocols to address fenceline equipment failures and interruptions.

Under its proposed plan, Tesoro does not provide details regarding how the refinery will handle power outages or unplanned scenarios that might disrupt fenceline-monitoring systems. Instead, the plan simply asserts that "Tesoro is *planning* to have a redundant backup monitoring system."[94] In other words, the monitoring plan is incomplete. The public does not receive these "planning" details explaining (1) what instruments will be part of this backup monitoring system; and (2) whether Tesoro has completed its backup monitoring system planning.

Tesoro must revise the plan to explain thoroughly its backup monitoring instruments and protocols, which should provide for continuous monitoring and timely deployment of backup systems.

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[89] Rule 1180(d)(2)(D).
[90] *Guidelines*, *supra* note 1, at 17.
[91] *Phillips 66 Wilmington Plan*, *supra* note 10, at 48; see also, *Phillips 66 Carson Plan*, *supra* note 27, at 46.
[92] *Guidelines*, *supra* note 1, at 3; Rule 1180(d)(2) (noting that "fenceline air monitoring plan shall provide the following detailed information").
[93] *EPA Handbook*, *supra* note 35, at 37 (Section 2.3).
[94] *Tesoro Plan*, *supra* note 15, at 38.

e. Wind Speed and Direction Detection System Details Lacking

The Guidelines require that refineries have an "on-site location to continuously record wind speed and wind direction data."[95] Documenting this meteorological information is critical in "interpreting the measurement results, including the transport and dispersion of air pollutants from the refinery to the community."[96]

Although both Phillips 66 refineries propose the installation of meteorological stations to "provide wind speed, wind direction, temperature, relative humidity and rainfall measurements," the plans fail to specify where the refineries will place these monitoring stations or the maintenance needs.[97] Such information is important in determining whether the location of these stations will accurately measure where emissions sources are coming from and what direction they are moving. Accordingly, the refineries must revise both plans to provide these important details.

f. Monitoring Equipment Calibration Requirements Omitted

The District's Guidelines state that fenceline air monitoring plans "*shall* address quality assurance, including . . . *calibration checks*," as part of a Quality Assurance/Quality Control (QA/QC) plan.[98] Tesoro and both Phillips 66 refineries fail to detail the calibration methods necessary to ensure quality data.

Although Tesoro's plan mentions that calibration will occur (e.g. during audits), the plan leaves out a detailed description of actual calibration methods.[99] Similarly, both Phillips 66 refineries represent that they will conduct monthly calibration checks, but fail to detail the particular steps they will take to ensure proper equipment performance.[100]

Indeed, perhaps it is not surprising that calibration methods are missing, given that actual optical sensing manufacturers and models are also absent in these plans. Even so, these plans fail to detail even standard calibration methods developed by the U.S. Environmental Protection Agency and other regulatory entities for optical sensing technology. Calibration is a key part of quality assurance, and as a result, the plans must identify the appropriate procedures.

(3) Implementation of Fenceline Air Monitoring Plan Deficiencies

Rule 1180 requires fenceline air monitoring plans to provide information about the proposed procedures or steps necessary for the "installation, operation, maintenance, and quality assurance, for the fenceline air monitoring system."[101] The preparation of this timeline ensures that each refinery contemplates how it will install and begin operating its fenceline monitoring system before the January 2020 deadline.

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[95] Rule 1180(d)(2)(C).
[96] *Guidelines*, *supra* note 1, at 16.
[97] See, e.g., *Phillips 66 Wilmington Plan*, *supra* note 10, at 7; see also, *Phillips 66 Carson Plan*, *supra* note 27, at 7.
[98] *Guidelines*, *supra* note 1, at 17.
[99] *Tesoro Plan*, *supra* note 15, at 45. The one exception is Tesoro's identification of a specific calibration for temperature measurements, but no other calibration for optical sensing or point monitors is identified.
[100] *Phillips 66 Wilmington Plan*, *supra* note 10, at 49; *Phillips 66 Carson Plan*, *supra* note 27, at 47.
[101] Rule 1180(d)(2)(F).

Phillips 66 Wilmington and Carson do not provide a firm timeline for the installation and operation of their fenceline monitoring systems, including when they will secure the monitoring equipment, construct platforms and other equipment infrastructure, and finalize quality assurance protocols. This lack of upfront planning undermines accountability and increases the likelihood that the refineries will fail to meet the statutory deadline to begin fenceline monitoring. Consequently, the refineries must revise their plans to provide reasonable implementation timelines.

(4) Distribution of Data to the Public Deficiencies

A central purpose of Rule 1180 is to collect and share real-time emissions data "with the community."[102] For that reason, fenceline monitoring plans are required to provide for multiple "[m]ethods of dissemination of data collected by the equipment . . . to the public."[103] There are several information-sharing deficiencies these plans must correct.

a. Public Notification Thresholds and Related Details Absent

Fenceline air monitoring plans must outline "notifications to subscribers when each of the pollutant levels exceed corresponding thresholds."[104] Refineries should consider a range of notification methods to ensure broad access to emissions information and meet the various communication preferences of the public, including via online, text messages, and electronic mail.[105]

Both of the Phillips 66 refinery plans do not provide any proposed notification thresholds for monitored pollutants. Such notification would allow nearby residents and locations with sensitive receptors to take adequate precautions. The refineries must revise the plans to provide health-protective threshold notifications.

In addition, both Phillips 66 refineries and Tesoro fail to include sufficient detail about the components of their public notification systems. For instance, the plans do not provide information about the range of options the public will have to receive critical information, including via text messages or mailed notices within a certain radius. Instead, the plans generally state that online websites will allow the "public to sign up for notifications."[106]

The refineries unreasonable delay providing details about these systems. As Tesoro states, the "final design [of the public notification system] will be created during implementation, *after* this plan is approved."[107] However, allowing these details to be finalized after plans are already approved would deprive the public of an opportunity to ensure that these notification systems – meant for their use and benefit – actually meet their needs. The plans must be revised to provide detailed information about the proposed public notification systems.

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[102] *Guidelines*, *supra* note 1, at 19.
[103] Rule 1180(d)(2)(G).
[104] *Guidelines*, *supra* note 1, at 20.
[105] *Id*. at 19.
[106] *Phillips 66 Wilmington Plan*, *supra* note 10, at 44; *Phillips 66 Carson Plan*, *supra* note 27, at 42; see also, *Tesoro Plan*, *supra* note 15, at 5, 57 (noting the web page will allow the public to sign up for notifications).
[107] *Tesoro Plan*, *supra* note 15, at 2.

b. Public Outreach and Education Program Excluded

As part of their efforts to share data, refineries must also design "an *effective* public outreach and education program" – this program must include informational meetings and workshops to notify community members about "health impacts associated with emissions levels detected," "reducing community exposure," and addressing "public questions."[108] This effort is particularly important to inform residents that might have limited internet access or may be monolingual non-English speakers, and for the refineries to receive input on how to improve data display, notifications, and monitoring.

Nonetheless, both Phillips 66 refineries and Tesoro failed to design a public outreach program, in accordance with Guidelines. The fenceline air monitoring plans must be revised to detail how refineries will implement this public outreach and education effort in the surrounding communities.

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For the reasons detailed above, the District cannot approve these plans in their current form. Substantial revisions are necessary to bring them into compliance with the explicit requirements of Rule 1180 and applicable Guidelines. As a result, the District should revise the proposed monitoring plans and recirculate them for additional review and comment prior to final approval. The District should also hold a public forum to discuss its general findings in advance of setting a comment deadline for the revised plans.

Further, in revising these plans, the District must hold refineries to the most stringent detection limits, in order to protect community health. All targeted compounds should be measured based on minimum detection limits that are less than, *at minimum,* the acute Recommended Exposure Level (RELs), as published by OEHHA 2017. Furthermore, AB617 Air Toxics and Criteria Pollutant reporting is also being updated and should be reviewed for consistency with health-protective data and requirements by the District, chemical by chemical.

As discussed in this letter, the plans include only *approximate* detection limits that are less stringent than OEHHA 2017 RELs, and must be tightened. For instance, OEHHA's 2017 limits for acrolein is more stringent than the levels proposed by both Phillips 66 refineries, Tesoro, and others. This is another reason why approximate detection limits, without any specific manufacturers identified, is unacceptable – the public cannot determine whether adequate equipment is included in the plan.

Finally, due to the District's limited comment period, the public did not receive sufficient time to review all of the refinery fenceline air monitoring plans, and to compare these plans to determine best practices that should be implemented across all of the plans. For that reason, we request that the District take the general issues expressed in this comment letter and consider them for all air monitoring plans under review. This approach will ensure that deficiencies identified in this comment letter are also addressed in other fenceline air-monitoring plans.

Sincerely,

[108] *Id*. at 19.

Oscar Espino-Padron, Staff Attorney, Earthjustice

Julia May, Senior Scientist, Communities for a Better Environment

Taylor Thomas, Research and Policy Analyst, East Yard Communities for Environmental Justice

Jesse N. Marquez, Executive Director, Coalition for a Safe Environment

Monica Embrey, Senior Campaign Representative, Sierra Club

Ricardo Pulido, Executive Director, Community Dreams

Pastor Alfred Carrillo, Apostolic Faith Center

Magali Sanchez-Hall, MPH, Executive Director, EMERGE

Chaplain Anthony Quezada, American Legion Post 6

Anabell Romero Chavez, Board Member, Wilmington Improvement Network

Dr. John G. Miller, MD, President, San Pedro & Peninsula Homeowners Coalition

Joe R. Gatlin, Vice President, NAACP

Modesta Pulido, Chairperson, St. Philomena Social Justice Ministry

Robina Suwol, Executive Director, California Safe Schools

Jane Williams, Executive Director, California Communities Against Toxics

Cynthia Babich, Executive Director, Del Amo Action Committee

Mitzi Shpak, Executive Director, Action Now

Olga Pikelnaya

From: John King <JKing@paramountcity.com>
Sent: Friday, January 11, 2019 5:52 PM
To: Rule 1180
Subject: comment - Paramount, refinery fenceline air monitoring plans
Attachments: letter_aqmd_rule1180plans_011119.pdf

Hello,

Please accept the attached letter as general comment from the City of Paramount regarding refinery fenceline air monitoring plans and Rule 1180.

Thanks,

John King
Planning Manager
City of Paramount
562-220-2049

Community Development
(562) 220-2036

January 11, 2019

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: SCAQMD Rule 1180 – Refinery Fenceline Air Monitoring Plans

Dear Dr. Polidori:

Thank you for giving the City of Paramount and the public the opportunity to comment on draft refinery fenceline air monitoring plans. It is our understanding that the former AltAir/Delek U.S. Holdings, Inc. refinery facility (now under World Energy ownership) in Paramount is now exempt from South Coast Air Quality Management District (SCAQMD) Rule 1180, including the requirement for a fenceline air monitoring plan. As Rule 1180 referenced this facility in Paramount and now that the operations have moved away from petroleum refining toward the production of renewables, we ask that the publicly available Rule 1180 support documents clearly indicate that the facility is exempt from Rule 1180.

The City of Paramount appreciates and supports the hard work of the SCAQMD and all stakeholders involved in the development of Rule 1180 and its implementation. If you have any questions or concerns, please contact me at 562-220-2049 or jking@paramountcity.com.

CITY OF PARAMOUNT

John King
Planning Manager

H:\ComDev\General\WP\JohnKing\Letters\2019letters\011119_AQMD_rule1180.doc

Olga Pikelnaya

From: Sophie <geng001@socal.rr.com>
Sent: Tuesday, January 29, 2019 9:59 PM
To: Rule 1180; Andrea Polidori
Cc: Gengh
Subject: 2019-01-29_GEng_Concerns-and-Comments_re-Rule1180-Ultramar-Valero-Fenceline-Monitoring-Plans
Attachments: 190129_GEng_Concerns-re-UltramarValero-Rule1180-Plan.pdf

Dear Dr. Andrea Polidori,

Please find the attached document:

"190129_GEng_Concerns-re-Ultramar-Valero-Rule1180_Plan.pdf"

submitted as a formal Public Comment regarding the Ultramar-Valero

"*Rule 1180 Fenceline Air Monitoring Plan*",

which I believe needs important enhancements and additions

with regard to monitoring and reporting potential releases of

Hydrogen Fluoride (HF) and Modified Hydrogen Fluoride (MHF),

among other Monitored Pollutants,

in order to be properly protective of the Public Health and Safety.

Most Sincerely,

(Dr.) Genghmun Eng

Citizen Concerns regarding the Ultramar-Valero
"Rule 1180 Fenceline Air Monitoring Plan", Dated 1/18/2019

Respectfully Submitted by: Dr. Genghmun Eng, 1/29/2019

As Hydrogen Fluoride is such a dangerous chemical when released into the human environment, the Ultramar-Valero Rule 1180 Fenceline Plan needs to include additional monitoring and lower threshold limits for reporting to SCAQMD, Emergency Responders, and the Community. Several changes are proposed herein to address these concerns.

Item A: (Section 1, Page 1-1)
For Monitored Pollutants, Table 1-1 Lists 2 Criteria Pollutants, 12 Volatile Organic Compounds, and 6 Other Compounds, including Hydrogen Fluoride. Text should be added to clarify that "Hydrogen Fluoride" includes materials that contain AHF {Anhydrous Hydrogen Fluoride liquid, under pressure} as well as MHF ("Modified Hydrogen Fluoride" liquid, under pressure, which is AHF with additives such as Sulfolane). The Plan also needs to include all the various additives and materials in any AHF/MHF tanks, which can affect the in-tank net vapor pressure, and their expected amounts.

Item B: (Section 1, Page 1-1)
One aim of the Rule 1180 Refinery Fenceline Monitoring Plan (FMP) is to increase reporting to the SCAQMD, Emergency Responders, and the Community, so that they can better understand the level of potential exposure to these hazardous materials. Therefore, a range of total onsite amounts for each of the materials in Table 1-1 should be determined by the Refinery, and listed in a separate Table. The amounts should include an Average Daily Value (ADV), and the 1-sigma, 2-sigma, and 3-sigma upper and lower bounds about that Average Daily Value. The ADV and bounds should encompass the total of the amounts generated, amounts stored, and amounts released for each of the Table 1-1 Pollutants.

Item C: (Section 1, Page 1-1; and Section 4.2, Page 4-1)
Much of the Refinery FMP is devoted to expected levels of Monitored Pollutant emissions during normal Refinery Operations. However, in order for the SCAQMD, Emergency Responders, and the Community to be aware of the level of potential exposure to these hazardous materials, Maximum Total Amounts that can be released for each of these materials in Table 1-1 should be determined by the Refinery and listed in a separate Table. In coordination with the SCAQMD, a Total-Amount-Threshold (TAT) should also be set for each Monitored Pollutant, where releases above the TAT level would be deemed a Large-Scale-Release. A Specific Emergency Response Plan should be developed for each Large-Scale-Release scenario, so that SCAQMD, Emergency Responders, and the Community can develop better Emergency Preparedness Scenarios for Accidental Releases. If no threshold values are exceeded, all measured data should be made available on a monthly basis, Data should be made available immediately to the SCAQMD, Police, Fire, Hospitals, Schools, and the Public, whenever any Monitored Pollutant threshold values are exceeded.

Item D: (Section 1, Page 1-1)
For the most toxic materials in Table 1-1, with large volume MTA values, the Refinery FMP needs to include additional monitors all around the Refinery Fenceline to account for various possible wind directions during an Accidental Release and differing Airborne Values at Different vertical heights.

Item E: (Section 2.4, Page 2-23)
Dispersion Modeling was based on a December 2009 Plan, which is nearly 10 years ago, and that Plan was based on the 2006-2007 Inventory Year, which was 12-13 years ago. Both the Dispersion Modeling Plan and the Inventory Year need to be updated. Citizen requests development of a new Dispersion Modeling February 2019 Plan, based on the 2016-or-later Inventory Year.

Item F: (see: Section 2.5.2, Page 2-26, Fig 2-17)
For Hydrogen Fluoride, both the lateral and vertical extent of any offsite ground-hugging toxic Hydrogen Fluoride cloud needs to be automatically determined, with automated data sent in real-time to ALL potentially affected agencies and groups, including the SCAQMD, Police, Fire, Hospitals, Schools, and City Emergency Notification Systems.

In order to have a Real-Time Emergency Assessment of any offsite ground-hugging Hydrogen Fluoride cloud release, multiple Hydrogen Fluoride Monitoring Poles (HFMP) should be placed at each Fenceline Monitoring Position, up to a vertical height of 25 meters. This 25 meter height was selected as the minimum needed vertical extent for monitoring a Large-Scale-Release HF-cloud, based on the Koopman 1986 Nevada Desert "Goldfish" Test. The lateral spacing of the HFMP also should be no greater than 100 meters apart, essentially forming an HF Monitoring Ring around the Refinery. This HF Monitoring Ring would be similar to the Existing Benzene Fenceline Monitors (EBFM), where the smallest lateral distance between EBFM is approximately 80 meters (as seen on Fig. 2-17).

Item G: (see: Sect. 3.2, page 3-2, Table 3-1; and Sect. 4.2, page 4-2, Table 4-1)
For each of the Monitored Pollutants, Table 3-1 lists the proposed Maximum Detection Limits (MDL) for the monitoring equipment. Table 4-1 lists a proposed 1-hour averaged ppm Notification Threshold. A comparison of these tables raises some questions as to the adequacy of the monitoring equipment.

In order for any 1-hour averaged ppm value of a Monitored Pollutant to be statistically valid, the detectability for that Monitored Pollutant needs to be at least 10X higher than the Notification Threshold. For several of the Monitored Pollutants, using this 10X amount sets the following needed equipment MDL values:

		Needed Equipment MDL	Table 3-1 MDL Value	MDL Factor
1.	Sulfur Dioxide	260 ppm	0.750 ppm	347 X
2.	Benzene	11 ppm	0.616 ppm	18 X
3.	Toluene	12,460 ppm	37.5 ppm	332 X
4.	Ethyl Benzene	42,800 ppm	75.0 ppm	571 X
5.	Total Xylenes	6,490 ppm	27.0 ppm	240 X
6.	Hydrogen Sulfide	39 ppm	10.0 ppm	4 X

The above "MDL Factor" is the ratio of the "Needed MDL" to the "Table 3-1 MDL Value". It clearly shows that the presently proposed Pollution Monitoring equipment is inadequate for these Monitored Pollutants by factors of ~4 X to >500 X. For these 6 Monitored Pollutants, additional Pollution Monitoring equipment, capable of not saturating before the above "Needed MDL" values, needs to be utilized by the Refinery as part of this Fenceline Monitoring Plan.

Item H: (see: Sect. 4.2, page 4-2, Table 4-1)
Many of the original Table 4-1 values also exceed the AEGL-2 limits for a 1-hour exposure, indicating that the Refinery release would be "Likely Disabling" before any Notification was done, which is totally unacceptable.

In addition, many Table 4-1 values also exceed 85% of the AEGL-3 limits. Here, 100% of the AEGL-3 value represents a likely LETHALITY limit. Thus, 85% of this AEGL-3 limit cannot be acceptable under any conditions. These particular Monitored Pollutants also involve some of the most dangerous gases that the Refinery can release. The next table shows these Table 4-1 Monitored Pollutants have values ranging from 85.5% to 259.3% of the AEGL-3 limit, which is why revised “Notification Threshold Limits" are absolutely necessary to protect the Public Health and Safety.

Pollutant	Valero Draft Plan Threshold (ppm, 1-hour average)2	Lethal AEGL-3 1 hour Exposure	Fraction of AEGL-3 Lethal Limit Valero Draft Plan Threshold (ppm, 1-hour average)2
Sulfur Dioxide	26	30.00	86.7 % of AEGL-3
Nitrogen Dioxide	32.4	20.00	162.0 % of AEGL-3
Ethyl Benzene	4280	1800	237.8 % of AEGL-3
Hydrogen Cyanide	38.9	15.00	259.3 % of AEGL-3
Hydrogen Fluoride	37.60	44.00	85.5 % of AEGL-3

Item I: (see: Sect. 4.2, page 4-2, Table 4-1)
While some of the proposed Table 4-1 "Notification Thresholds" may be adequate, many of the proposed Table 4-1 values are far too high to provide the SCAQMD, Police, Fire, Hospitals, Schools, and the Public useful information in the event of an Accidental Release. Those high values need to be drastically lowered to provide additional warning protection. Due to the significantly hazardous nature of many of these Monitored Pollutants, a new 10-minute averaged ppm value also needs to be included in this Fenceline Monitoring Plan as an additional "Notification Threshold" criterion, giving this table as recommended ppm values for the various Monitored Pollutants:

Pollutant	NEW Proposed Threshold (ppm, 10 min average)	NEW Proposed Threshold (ppm, 1-hour average)2
Sulfur Dioxide	0.80	0.40
Nitrogen Dioxide	2.00	1.00
Formaldehyde	3.60	1.80
Acetaldehyde	67.40	33.70
Acrolein	0.12	0.06
1,3-Butadiene	75.20	37.60
Styrene	80.00	40.00
Benzene	2.20	1.10
Toluene	268.00	134.00
Ethyl Benzene	132.00	66.00
Total Xylenes	520.00	260.00
Hydrogen Sulfide	2.04	1.02
Carbonyl Sulfide*	4.16	2.08
Ammonia	120.00	60.00
Hydrogen Cyanide	8.00	4.00
Hydrogen Fluoride	4.00	2.00

For the 1-hour average ppm values, this table uses the smaller of either the original Refinery Table 4-1 values, or 2 times the AEGL-1 limit for 1 hour exposure. The new 10-minute-average ppm values were derived by doubling the 1-hour limit value. These values are much more likely to be protective of the Public Health and Safety, compared to the original Refinery Proposed Table 4-1 limits.

SCAQMD Rule 1180 Contact Data: Comments/Concerns directed to **Rule1180@aqmd.gov**

Dr. Andrea Polidori, SCAQMD Atmospheric Measurements Manager, **APolidori**@aqmd.gov, (909) 396-3283

Dr. Olga Pikelnaya, SCAQMD Atmospheric Measurements Group, **OPikelnaya**@agmd.gov, (909) 396-3157

Mailing Address: SCAQMD, 21865 Copley Drive, Diamond Bar, CA 91765

Olga Pikelnaya

From: Lozo, Carolyn@ARB <Carolyn.Lozo@arb.ca.gov>
Sent: Monday, February 4, 2019 11:12 AM
To: Olga Pikelnaya; Andrea Polidori
Cc: Mitchell, Alexander (Lex)@ARB
Subject: RE: CARB comments on SCAQMD Rule 1180 Fenceline Monitoring Plans
Attachments: SCAQMD_Rule_1180_Fenceline_Monitoring_Plan_Comments-Valero Wilmington.docx

Andrea and Olga,

CARB staff have reviewed Valero Wilmington's fenceline monitoring plan prepared pursuant to SCAQMD Rule 1180, and we submit the attached comments for your consideration. Please let me know if you have any questions.

Thank you,

Carolyn Lozo
Manager, Program Assessment Section
Oil and Gas and GHG Mitigation Branch
Industrial Strategies Division
916.445.1104
clozo@arb.ca.gov

-----Original Message-----
From: Olga Pikelnaya <opikelnaya@aqmd.gov>
Sent: Monday, January 07, 2019 10:09 PM
To: Lozo, Carolyn@ARB <Carolyn.Lozo@arb.ca.gov>; apolidori <apolidori@aqmd.gov>
Cc: Mitchell, Alexander (Lex)@ARB <Alexander.Mitchell@arb.ca.gov>
Subject: RE: CARB comments on SCAQMD Rule 1180 Fenceline Monitoring Plans

Thank you Carolyn,
Olga

_____
From: Lozo, Carolyn@ARB [Carolyn.Lozo@arb.ca.gov]
Sent: Monday, January 07, 2019 4:34 PM
To: Olga Pikelnaya; Andrea Polidori
Cc: Mitchell, Alexander (Lex)@ARB
Subject: CARB comments on SCAQMD Rule 1180 Fenceline Monitoring Plans

Andrea and Olga,

Please accept CARB's comments (attached) on the refinery fenceline monitoring plans prepared pursuant to SCAQMD Rule 1180. If you have any questions about our comments, please let me know.

[CARB]
Carolyn Lozo
Manager, Program Assessment Section
Oil and Gas and GHG Mitigation Branch
Industrial Strategies Division
916.445.1104
clozo@arb.ca.gov<mailto:clozo@arb.ca.gov>

CARB comments on SCAQMD Rule 1180 Fenceline Monitoring Plans
January 31, 2019

Valero Wilmington Refinery:

- Pages 2-7 – 2-8:
  - Valero identifies nearby sensitive receptors by providing a list of schools in Table 2-2 and mapping the locations of these schools in Figure 2-5. However, Valero does not identify or map other types of sensitive receptors indicated in the South Coast Air Quality Management District's (AQMD's) Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines (Guidelines), including day care centers, hospitals, clinics, nursing homes, and recreation areas. CARB recommends that Valero identify and map the locations of all types of sensitive receptors listed in the Guidelines located within 2.5 kilometers of the refinery.
- Pages 2-9 – 2-13:
  - CARB recommends that relative humidity and temperature (in addition to wind speed and direction) be monitored as part of the meteorological instrumentation. Moisture and temperature can have a substantial impact on instrumentation, as detailed on Page 2-9 of Valero's fenceline monitoring plan. Spiking humidity levels could signal staff that equipment might malfunction or be less accurate in the coming hours.
  - Valero uses the terms "wind speed" (a scalar quantity) and "wind velocity" (a vector quantity) interchangeably in the Plan. Because Valero describes "wind direction" separately, CARB recommends that Valero use the term "wind speed" consistently throughout the Plan.
  - In the third paragraph of Section 2.2, Valero indicates, "Temperature, relative humidity, and solar radiation (a parameter used to determine cloud cover) affect the mixing height of pollutants in the atmosphere. This is indicative of the distance emissions will travel." CARB recommends revising the second sentence to, "This is indicative of the <u>vertical</u> distance emissions will travel."
- Page 2-13:
  - In Section 2.2.2 of the Plan, Valero indicates that, "The meteorological station will match the time resolution of the air quality monitors." Section 3 of the Guidelines requires fenceline monitoring locations to continuously record wind speed and direction data. This section also requires "equipment to be employed for real-time meteorological data collection at high time resolution (at minimum, matching the time resolution of the air quality monitors)…" CARB recommends that Valero clarify the statement above in Section 2.2.2 of the Plan to state, "The meteorological station will measure and collect meteorological data continuously and average the data to match the time resolution of the air quality monitors."
- Pages 2-13 – 2-14:

- Figure 2-9 appears to indicate that the proposed location of the meteorological station is on top of the main office building of the refinery. According to the U.S. EPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements, "If a wind instrument must be mounted on the roof of a building, it should be mounted high enough to be out of the wake of an obstruction. Roof mounting is not a good practice, however, and should only be resorted to when absolutely necessary." If Valero intends to site the meteorological station on the roof of a building, it should provide additional justification for this decision in the Plan.

- Pages 2-14 – 2-23:
  - Valero states that the analysis of emissions sources was based on the AB2588 health risk assessment (HRA) submitted in 2009 for the 2006-2007 inventory year. Similarly, Valero has based the dispersion modeling and HRA analysis and conclusions for this monitoring plan on the AB2588 HRA submitted in 2009 for the 2006-2007 inventory year. However, Valero does not discuss the similarities or differences between the current source configuration and emissions and those described in this analysis. CARB recommends that Valero add a short discussion on the representativeness of the source configuration and emissions in this analysis to the current source configuration and emissions. If this comparison reveals substantial differences, CARB recommends updating the emissions, dispersion modeling, and HRA analysis and conclusions as needed.
  - The other refinery fenceline monitoring plans show dispersion modeling results for multiple compounds that are emitted from their facilities. CARB recommends Valero's plan include more dispersion monitoring results as well to better substantiate where monitors are to be placed.
- Pages 2-27 – 2-31:
  - CARB recommends adding two open path monitors to evaluate the impact of refinery emissions on motorists on the Terminal Island Freeway. These paths would be situated parallel to the freeway and would aim to capture emissions impacts from the main processing areas on the western side of the refinery and storage tanks in the southeast part of the refinery on freeway. The first additional path would be located just north of the Terminal Island Freeway and extend west-to-east approximately 400 meters across the western side of the refinery where the main processing areas are located. The second additional open path would be located just south of the Terminal Island Freeway and extend west-to-east approximately 250 meters near the storage tanks in the southeast part of the refinery.
  - Considering offshore winds coming from the E-ENE, CARB recommends there be an additional open path monitor sited just north of the Terminal

Island Freeway and a reflector sited near the location of Shelter 1. This placement will better capture emissions from the W-NW'rn portion of the refinery where most emission sources are located.

- The Plan does not explicitly identify the time resolution for collection of fenceline monitoring data. CARB recommends that Valero update the plan to clearly indicate the frequency of data collection and averaging for all equipment. CARB notes that the Guidelines require that "fenceline monitoring shall be operated continuously with a required time resolution of five-minute averaging when feasible." (See Section 2b of the Guidelines).
- Based on the monitoring paths shown in Figures 2-20 and 2-21, it appears that Valero may alternate the open-path FTIR and UV light source between the two reflectors at the opposite ends of a given path (i.e., the light source at Shelter 2 may alternate between the reflectors at the ends of Paths 2A and 2B, and the light source at Shelter 3 may alternate between the reflectors at the ends of Paths 3A and 3B). This would not allow for continuous monitoring coverage along these paths; continuous monitoring coverage is required by the Guidelines, as noted above.
- CARB recommends extending Path 3A to the north, up to location where the refinery is bisected by the Terminal Island Freeway, to provide greater monitoring coverage along this path. If there are limitations to extending Path 3A to the north, Valero should discuss these limitation(s) in the Plan.
- CARB recommends extending Path 3B to the west, past the location where the refinery is bisected by the Terminal Island Freeway, to provide greater monitoring coverage along this path. If there are limitations to extending Path 3B to the west, Valero should discuss these limitation(s) in the Plan.
- CARB recommends extending Shelter 1 to the south, closer to Path 3B proposed location from the comment above, this would allow for better coverage of the facility. If there are limitations to extending Shelter 1 to the south, Valero should discuss these limitation(s) in the Plan.
- CARB recommends including an additional Path between Path 1 and Path 2A to fully surround the facility. If there are limitations to include an additional path, Valero should discuss these limitation(s) in the Plan.
- Based on the locations of H_2S and diesel exhaust particulate emissions sources shown in Figures 2-13 and 2-14, respectively, CARB recommends shifting the locations of the H_2S analyzers and black carbon aethalometers to the opposite ends of Path 1 and Path 3A where these monitors will be in the predominant downwind direction of the locations where emissions of H_2S and diesel exhaust are highest. These locations will also better place these monitors between the refinery's largest sources of H_2S and diesel exhaust emissions and downwind communities.

- Page 3-6

  - In the event of monitoring equipment failure of 24 hours or more, Valero intends to use UVDOAS and FTIR instruments on the same path as backup for each other. However, the Plan does not describe potential limitations, if any, of this approach (e.g., increased detection limits, inability of UVDOAS or FTIR to monitor certain pollutants, monitoring extended paths that exceed maximum path lengths). CARB recommends that Valero add a discussion of these limitations to the Plan.
  - In the event that both the FTIR and UV-DOAS instruments cannot be online for more than 336 hours (i.e., 14 days), Valero plans to deploy passive sampling in place of these instruments for "the majority of pollutants." CARB recommends that Valero deploy alternative monitoring strategies much more quickly (i.e., within 24 hours) and that backup monitoring systems be capable of monitoring all pollutants that are required to be monitored under the Guidelines. CARB also recommends that Valero consider setting up a mobile backup monitoring system similar to the backup systems proposed for the Phillips 66 Carson and Wilmington refineries.
- Appendix A, Page 1-1:
  - The Plan currently provides only a high-level outline of the Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOP) for measurement equipment and indicates that the QAPP and SOPs will be submitted for review and approval by SCAQMD after the Fenceline Monitoring Plan has been approved and the final equipment selection has been completed. This is not consistent with the requirements of the Guidelines. Most sections of the QAPP and SOPs can and should be completed as soon as possible to allow for public review.

Olga Pikelnaya

From:	Oscar Espino-Padron <oespino-padron@earthjustice.org>
Sent:	Wednesday, February 6, 2019 1:44 PM
To:	Rule 1180
Cc:	Andrea Polidori; Olga Pikelnaya
Subject:	Comments on Valero Wilmington Refinery Rule 1180 Fenceline Air Monitoring Plan
Attachments:	2019-0206 Valero Comments - final.pdf

VIA: ELECTRONIC MAIL ONLY

Dear Dr. Polidori,

Attached please find comments regarding the Rule 1180 draft fenceline air-monitoring plan prepared by Valero Wilmington Refinery.

Thank you,

Oscar Espino-Padron
Staff Attorney
Earthjustice California Office
800 Wilshire Blvd, Suite 1000
Los Angeles, California 90017
T: 415.217.2198
F: 415.217.2040
earthjustice.org
facebook.com/earthjustice
twitter.com/earthjustice

February 6, 2019

VIA: ELECTRONIC MAIL ONLY
(Rule1180@aqmd.gov)

South Coast Air Quality Management District
Attn: Dr. Andrea Polidori
Atmospheric Measurements Manager
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on Rule 1180 Fenceline Air Monitoring Plan for Valero Wilmington Refinery

Dear Dr. Polidori:

The undersigned organizations submit the following comments concerning the fenceline air monitoring plan for Valero Wilmington Refinery (Valero). Approval of this plan in its current form would violate the basic requirements of Rule 1180, and disregard the explicit instructions provided under the Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines (Guidelines).

In the fourth quarter of 2018, Valero Energy Corporation reported $1.5 billion in operating income from its refining segment, an increase from the $982 million reported in the fourth quarter of 2017.[1] At the same time, communities living near the Valero refinery in Wilmington have also seen an increase: *toxic air contaminants over the last four years*.[2] In 2017, Valero reported 75,668.9 pounds of toxic air contaminants, 74,327.4 pounds in 2016, 72,068.72 pounds in 2015, and 65,330.16 pounds in 2014.[3] Among the significant pollutants released into the community are several hundred pounds of 1,3-butadiene and benzene, which are known carcinogens.[4]

As a consequence of these increased emissions, families residing near the refinery have experienced added health risks, and financial burdens often in the form of missed work days and higher healthcare expenses. This increased economic stress further disadvantages hardworking families in the area, where the median household income is about $40,627 a year and a high percentage of residents 25 and older have less than a high school education.[5]

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[1] *Valero Energy Reports 2018 Fourth Quarter and Full Year Results*, MARKET WATCH, https://on.mktw.net/2DVlLfr (last visited Feb. 5, 2019); *Valero Energy Reports 2017 Fourth Quarter and Full Year Results*, VALERO ENERGY CORP., https://bit.ly/2pDOjCC (last visited on Feb. 5, 2019).

[2] Further, as explained in this comment letter, these reported air emissions inventories are underestimated, as confirmed by the District's Fluxsense study published in 2017.

[3] *Annual Emissions Reporting for Ultramar Inc.*, SOUTH COAST AIR QUALITY MGMT. DIST., http://www3.aqmd.gov/webappl/fim/prog/emission.aspx?fac_id=800026 (last visited Feb. 5, 2019) [hereafter *Valero Emissions Reporting*].

[4] *Benzene*, CAL. OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT, https://oehha.ca.gov/air/chemicals/benzene (last visited Feb. 5, 2019); see also, *1,3 Butadiene*, CAL. OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT, https://oehha.ca.gov/air/chemicals/13-butadiene (last visited Feb. 5, 2019).

[5] *Wilmington*, L.A. TIMES, http://maps.latimes.com/neighborhoods/neighborhood/wilmington/ (last visited Feb. 5, 2019) [hereafter *Wilmington Profile*].

Overburdened communities living near this refinery need a fenceline air monitoring plan that adequately detects and measures routine and unplanned emissions. These Rule 1180 plans are necessary not only to inform the public about air pollution impacts, but also to assist in reducing refinery emissions and related health burdens. The South Coast Air Quality Management District (District) must deliver on its obligation to "clean the air and protect the health of all residents."[6]

As detailed in this comment letter, there are several deficiencies in Valero's draft plan that must be addressed. Moreover, we incorporate by reference the comments submitted on January 11, 2019, concerning the Phillips 66 Wilmington, Phillips 66 Carson, and Tesoro Wilmington/Carson refineries. In making revisions to Valero's draft plan, the District should note the general concerns highlighted in those comments. For instance, the District should require that Valero revise its plan to:

(1) consider a range of meteorological conditions beyond prevailing winds or average conditions in assessing spatial coverage and impacts on nearby sensitive receptors (e.g. wind changes, coastal fumigation, building downwashes, diurnal changes in mixing height, inversions and any conditions that create air stagnation that keeps pollutants in communities all around the refinery);[7]

(2) provide a detailed description of calibration methods and steps to ensure proper equipment performance and quality data, after identifying particular equipment manufacturers (e.g. plan should incorporate calibration as part of its quality assurance/control plan and consider standard calibration methods for optical remote sensing technology);[8] and

(3) construct an effective public outreach and education program that includes informational meetings and workshops to provide updates and answer questions (e.g. the plan should specify how the refinery will share information proactively with community members that have technology limitations or are non-English speakers).[9]

By addressing the concerns highlighted in this comment letter, the District will ensure that Valero's plan protects surrounding communities through adequate detection of emissions at the fenceline. As requested in prior comments, the public should receive an opportunity to review and comment on the *final* fenceline air monitoring plans prior to the District's approval. The current draft plans lack sufficient detail for the public to weigh-in on the adequacy of monitoring. Finally, the District should also provide a public forum to discuss its general findings prior to circulating the final plans for review and comment.

*****

Rule 1180 requires "detailed information" concerning a range of fenceline air monitoring plan components, including "siting and equipment specifications," the particular "equipment to be used," "maintenance and failure procedures," "procedures for implementing" the plan, and "methods for

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[6] *Goals & Priority Objectives*, SOUTH COAST AIR QUALITY MGMT. DIST., http://yourstory.aqmd.gov/nav/about/goals-priority-objectives (last visited Feb. 5, 2019).
[7] *Comments Concerning Rule 1180 Fenceline Air Monitoring Plans for Phillips 66 Wilmington, Phillips 66 Carson, & Tesoro Carson/Wilmington Refineries,* 9-11(Jan. 11, 2019) [hereafter *Jan. 11 Comments*].
[8] *Id*. at 16 (calibration).
[9] *Id*. at 18 (public outreach). Notably, almost half of the population in the Wilmington area is foreign-born, with most immigrating from Mexico and Guatemala. *Wilmington Profile*, *supra* note 5.

dissemination of data."[10] Confirming this mandate, the Guidelines state that "[a] *fundamental* requirement of Rule 1180 is that a fenceline air monitoring plan must provide *detailed* information about the installation, operation, and maintenance of a fenceline air monitoring system."[11]

As noted below, however, Valero's plan fails to meet this information disclosure requirement in several cases, or completely omits necessary details. For these reasons, the refinery must amend the plan.

I. Fenceline Air Monitoring Spatial Coverage Deficiencies

The Guidelines instruct refineries to consider a range of factors in siting monitoring equipment. For instance, refineries are required to identify broadly the "closest sensitive receptor(s)," note instrument "GIS coordinates" and "measurement pathways," and conduct modeling to understand the "atmospheric dispersion characteristics of compounds of concern."[12] These considerations ensure that refineries provide adequate coverage along the perimeter. Valero fails to comply with of these requirements.

a. Identification of Residences and Sensitive Receptors Inadequate

In determining the necessary fenceline coverage, refineries must identify the proximity of residential homes and sensitive receptors, which includes "schools, daycare centers, hospitals, clinics, nursing homes, and recreation areas."[13] Indeed, it is important to identify these residences and sensitive receptors to ensure refineries design a fenceline air monitoring system that adequately tracks pollutants moving in the direction of these receptors. Moreover, pinpointing these receptors would also inform the refinery's outreach and emissions data distribution efforts. Nonetheless, Valero's draft plan does not provide sufficient information about sensitive receptors near the refinery, and it attempts to erase families living within areas Valero purports to be solely comprised of "industrial uses."[14]

In identifying nearby sensitive receptors, Valero inexplicably focuses solely on schools.[15] The plan identifies eight schools in the area that are within 2,500 meters of the refinery and pinpoints these schools on a map.[16] But Valero fails to document a variety of other sensitive receptors in the area, including hospitals, child care centers, and nursing homes, that exist near the refinery. Valero's plan must explain the reasons for not including these other sensitive receptors.

Additionally, Valero creates the illusion that the refinery is surrounded in all directions by "industrial uses," and it makes this assertion partially based on its own "general knowledge."[17] Valero cannot speculate and generalize about the uses that occur near the refinery. In reality, contrary to Valero's claim, there are homes scattered throughout the areas it classifies as industrial.

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[10] Rule 1180(d)(2)(A), (B), (D), (F), (G).
[11] *Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines*, SOUTH COAST AIR QUALITY MGMT. DIST., 1 (Dec. 2017) [hereafter *Guidelines*] (emphasis added).
[12] *Id*. at 3-4.
[13] *Id*. at 4, 13.
[14] Valero Wilmington Refinery, *Rule 1180 Fenceline Air Monitoring Plan*, 2-6 (Jan. 18, 2019) [hereafter *Valero Plan*].
[15] *Id*. at 2-7.
[16] *Id*. at 2-7, 2-8.
[17] *Id*. at 2-6.

For instance, homes are located on the western side of the refinery's boundary on Watson Ave. and N. Pioneer Ave. and on N. Flint Ave. and G St. in Los Angeles, and on eastern side of the refinery's edge at 1341 W. 15th St. in Long Beach.[18] As the District knows, zoning has been a serious problem in Los Angeles, allowing heavy industrial practices to occur adjacent to homes. This issue is well documented and has spurred an effort to revise zoning practices in the City.[19] Valero's draft plan cannot disregard families living in these areas.

In sum, Valero's claim that the "closest residential *uses* are approximately 740 meters (0.5 miles) from the northwest boundary of the Refinery" is inaccurate.[20] This assertion overlooks nearby families that reside in between industrial activities. Moreover, the refinery must reassess the location of sensitive receptors in the area and identify these receptors accurately in its plan.

b. Additional Fenceline Air Monitoring Coverage Required

Although Valero provides a list of "practical limitations" that influenced its selection of monitoring locations and coverage, the plan does not adequately explain how each of these factors influenced the placement of Sampling System 1, 2, and 3.[21] Valero must revise the plan to provide clarification and detailed information about the specific reasons for its placement of each monitoring equipment. Additionally, the plan leaves unexplained several fenceline coverage gaps.

First, the northern segment of the refinery facing the Terminal Island freeway lacks any fenceline monitoring. The draft plan fails to provide coverage in that area of the refinery to detect emissions of hydrogen fluoride (HF), styrene, and a range of other chemicals and volatile organic compounds from several sources Valero identifies in its plan.[22] Many of these emissions, particularly HF, have the potential for catastrophic consequences and should be monitored at the perimeter. As illustrated in blue on Figure 1 below, the District should require additional monitoring to cover that area of the refinery. Moreover, the plan should include another monitoring segment to close the gap between this additional monitoring network (indicated in blue on Figure 1) and Path 2B, given that predominant wind coming for the northwest would move HF through that gap.[23]

Next, Sampling System 1 should incorporate an additional path (i.e. a Path 1B) to provide coverage on the western portion of the refinery's edge. Although Valero claims that the location of Sampling System 1 considers the "curved fenceline, elevated obstructions, and localized moisture sources," it fails to explain the omission of an additional path extending towards the Terminal Island freeway.[24] As previously noted, there are several homes located near the western boundary of the refinery

[18] Note that Valero's draft plan erroneously describes the area as "the City of Wilmington." *Id*. at 2-7. Wilmington is not a city. Rather, it is a neighborhood within the City of Los Angeles. The refinery itself is also located in Wilmington.
[19] *On-the-ground pollution data spurred stricter zoning in Los Angeles,* HIGH COUNTRY NEWS (Jan. 31, 2019), https://www.hcn.org/articles/letter-from-california-on-the-ground-pollution-data-stricter-zoning-in-los-angeles.
[20] *Valero Plan*, *supra* note 14, at 2.7 (emphasis added).
[21] *Id*. at 2-27.
[22] *Id*. at 2-19, 2-22.
[23] *Id*. at 2-9 (noting "predominant wind direction flows northwest and west-northwest").
[24] *Id*. at 2-28.

in between industrial practices. Because residents are at risk of potential exposures, further fenceline monitoring is needed to track air emissions moving past the fenceline in that direction. This recommended path is illustrated in orange on Figure 1 below.

Finally, Valero should consider additional fenceline coverage in the southern part of the refinery adjacent to the Terminal Island freeway, including an extension of Path 3A. The plan does not provide any coverage for several sources in that area of the refinery. As illustrated in green on Figure 1, an additional sampling system should be considered for this area of the refinery.

This additional coverage would track emissions from several sources in that area of the refinery, including styrene, BTEX, and hydrogen sulfide.[25] And it would provide needed coverage on the western fenceline of the refinery that faces residential areas, as noted above. Further, if Valero believes extending Path 3A would be infeasible (e.g. sacrifice data quality or detection), it should describe in detail those reasons.

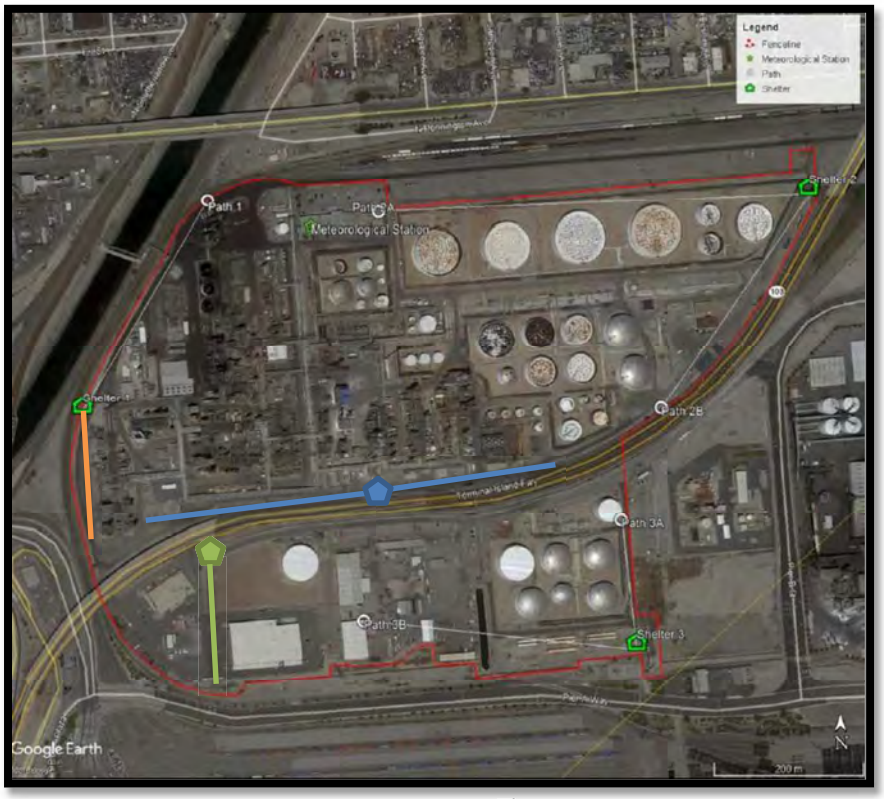

Figure 1. Additional Fenceline Coverage.[26]

c. Excessive Path Lengths Should be Addressed

As noted in our prior comments, monitoring equipment path distances are important to consider because excessive lengths can undermine an instrument's ability to provide quality data. For instance,

[25] *Id*. at 2-19, 2-20.
[26] *Id*. at 2-28.

UV-DOAS instruments with "[l]ong path lengths can cause complications when analyzing results."[27] For this reason, the path length for a UV-DOAS system is generally 500 meters to reduce interferences.[28] Similarly, FTIR systems have "limited range" and typically have a maximum path length of about 400 to 500 meters.[29]

In its plan, Valero recognizes the importance of setting appropriate path distances. The refinery contends that "[s]horter paths sacrifice open path instrument sensitivity," while "longer paths sacrifice the measurement's ability to suggest the source of the emission."[30] Despite understanding the implications of excessive path distances, Valero sets Path 2A under Sampling System 2 – which is equipped with an FTIR, UV-DOAS, and other components – at 328 meters and admits that the length "is longer than ideal."[31]

Valero sets this less than ideal path length without even discussing alternatives, simply calling it an "unavoidable compromise."[32] For instance, Valero did not consider incorporating an additional sampling system to break up the path to a more acceptable length. This additional system would have also provided extra coverage to close the monitoring gap in the northern boundary of the refinery. Further, Valero fails to discuss particular equipment manufacturers that provide monitoring instruments capable of adequately measuring emissions at the proposed distance.

As a result, Valero should be required to consider an additional sampling system, among other options, or explain why this approach would be infeasible. Under Rule 1180, a plan must be revised if the "fenceline air monitoring plan does not adequately measure any pollutant(s) identified."[33] Valero admits the current plan violates this requirement by setting an imperfect, flawed path distance. As a result, the plan must be revised.

d. Air Dispersion Modeling Deviates from Guidelines

As part of its spatial coverage analysis, the Guidelines require that refineries consider dispersion modeling to determine the sampling locations and identify hot spots that might require targeted attention.[34] Further, the Guidelines note that dispersion modeling "*shall* be conducted using U.S. EPA's Preferred and Recommended Air Quality Dispersion Model."[35] The U.S. EPA's preferred air dispersion models are the American Meteorological Society (AMS)/EPA Regulatory Model (AERMOD), CAlifornia LINE Source Dispersion Model (CALINE3), Complex Terrain Dispersion Model Plus Algorithms for

[27] U.S. ENVTL. PROTECTION AGENCY, *EPA Handbook: Optical Remote Sensing for Measurement and Monitoring of Emissions Flux*, 26 (Dec. 2011) (Section 1.6) [hereafter *EPA Handbook*], https://www3.epa.gov/ttnemc01/guidlnd/gd-052.pdf.
[28] *Id*.
[29] *Id*. at 25.
[30] *Valero Plan*, *supra* note 14, at 2-27.
[31] *Id*. at 2-29.
[32] *Id*. at 2-29. Moreover, to justify this path length, the plan states that it aims to avoid "hazardous areas (near the tanks)." *Id*. This statement requires clarification. If this area is considered hazardous due to fumes or other air emissions, it would increase the need for adequate monitoring.
[33] Rule 1180 (d)(5)(C).
[34] *Guidelines*, *supra* note 11, at 3 (emphasis added).
[35] *Id*. at 5.

Unstable Situations (CTDMPLUS), Offshore and Coastal Dispersion Model (OCD), and the refined and screened versions of CALINE3 (CAL3QHC/CAL3QHCR).[36]

In developing its monitoring plan, Valero relies on its 2009 revised Health Risk Assessment (HRA) for the dispersion modeling.[37] The HRA, however, does not use one of the U.S. EPA preferred/recommend air dispersion models noted above. Instead, the HRA uses ISCST3, an alternative dispersion model, which Valero admits was fully replaced by AERMOD as the regulatory model in 2006.[38] Valero cannot rely on an outdated, alternative model to assess dispersion.

Moreover, the HRA relies on outdated emissions data from over 10 years ago (i.e. 2006-2007 emissions inventories). For instance, in 2007, Valero reported 19,147.37 pounds of toxic air contaminants – in 2017, the refinery released *75,668.9* pounds of toxic air contaminants.[39] Similarly for criteria pollutants, Valero released 450.71 tons in 2007, and in 2017, the refinery reported 795.49 tons.[40]

Even these reported emissions inventories underestimate actual emissions of volatile organic compounds, including benzene. As confirmed by the District's own 2017 Fluxsense study, Valero's release of volatile organic compounds are about 11 times higher than those reported in its air emissions inventories.[41] Similarly, emissions of benzene are 39 times higher than those reported in air emissions inventories.[42]

Consequently, the District must require that Valero use updated, acceptable modeling to assist in understanding dispersion characteristics of target compounds, including health risks and burdens using actual emissions. The current draft plan does not accurately model the dispersion of these pollutants, and without that information, Valero's proposed fenceline monitoring system is arbitrary and inadequate to measure target pollutants.

e. Air Monitoring Equipment Coordinates and Elevations Unknown

The Guidelines require that fenceline air-monitoring plans provide "GIS coordinates" of equipment locations and the "[e]levations at which equipment will be placed."[43] Although Valero's plan indicates generally where each sampling system will be located, it fails to provide specific coordinates for each of these systems. Moreover, the plan fails to note the height of each sampling system component,

[36] *Air Quality Dispersion Modeling - Preferred and Recommended Models*, U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models (last visited Feb. 5, 2019).
[37] *Valero Plan*, *supra* note 14, at 2-23.
[38] Valero Wilmington Refinery, *Revised AB2588 Health Risk Assessment*, 5 (Dec. 2009).
[39] *Valero Emissions Reporting*, *supra* note 3.
[40] *Id*.
[41] Johan Mellqvist, *Emission Measurements of VOCs, NO2 and SO2 from the Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Optical Remote Sensing Methods*, 2-5 (April 11, 2017), https://www.courthousenews.com/wp-content/uploads/2017/06/FluxSense-Study.pdf.
[42] *Id*.
[43] *Guidelines*, *supra* note 11, at 4, 13.

merely stating that "[s]ample heights will be *approximately* 5-15 meters to avoid potential obstructions of the proposed open path lengths."[44]

Valero must revise the plan to provide specific coordinates, indicate at what elevation each system will be place, and note the reasons for selecting particular elevations (e.g. buildings near the path or other obstructions in that area). Without those details, it is not possible for the District and public to determine the adequacy of monitoring equipment siting under this plan.

II. Fenceline Air Monitoring Equipment Selection and Management Deficiencies

Rule 1180 requires the selection of specific "[e]quipment to be used to continuously monitor, record, and report air pollutant levels."[45] To assist in the selection of that equipment, the Guidelines, provide an overview of monitoring *technologies* that refineries should consider, with a particular focus on open-path systems.[46] The selection of particular equipment by refineries that uses the District's preferred technology is necessary to provide detailed information concerning a range of other required monitoring plan elements.

a. Selection of Specific Air Monitoring Equipment Omitted

After selecting fenceline air monitoring equipment, Valero is required to then explain the "detection limits" and "operation and maintenance requirements of selected equipment."[47] Although Valero describes the air monitoring technologies it aims to use (i.e. open path), the plan does not specify a particular equipment manufacturer. By not committing to a manufacturer, Valero's plan fails to provide detailed information about the necessary maintenance, and it can also only speculate about detection limits.

Valero admits that "detection limits," as well as "path lengths," will be "dependent on final equipment manufacturer."[48] Nonetheless, the plan notes typical detection limits and prescribes hypothetical path lengths without actually selecting specific equipment. Similarly, Valero notes that "exact preventative maintenance requirements and timeliness will be determined at such time as final equipment manufacturer selection has been completed."[49] As a result, Valero postpones providing any maintenance details and developing the related quality assurance/control plan until specific equipment is confirmed.

Consequently, Valero's plan is incomplete. The particular manufacturer must be selected for the public to weigh-in on possible alternatives, and for Valero to avoid speculation and instead present the *actual* detection limits, path lengths, maintenance, calibration, and other quality assurance measures the refinery will implement.

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[44] *Valero Plan*, *supra* note 14, at 2-27 (emphasis added).
[45] Rule 1180(d)(2)(A).
[46] *Guidelines*, *supra* note 11, at 12-13.
[47] *Id*. at 4.
[48] *Valero Plan*, *supra* note 14, at 3-2.
[49] *Id*. at 3-6.

b. Measures to Address Meteorological Impacts on Equipment Absent

As noted in past comments, the Guidelines require that refineries consider weather effects on equipment and methods to address possible interferences. For instance, the Guidelines note that "[d]ue to the high prevalence of marine fog in the areas where the Basin refineries are located, heaters and fans may be required to keep the instrument optics and reflector mirrors free of moisture to maximize data recovery."[50]

In its draft plan, Valero acknowledges that "high humidity in combination with high temperature" have an impact on instrumentation.[51] Presumably, the impact of these meteorological conditions would include equipment fogging that would undermine the collection of quality data. Nonetheless, Valero fails to prescribe any measures to address fogging, including the use of heaters and fans. Because the refinery is near the ocean, and the area experiences high humidity, the plan must be revised to consider options that mitigate meteorological impacts on equipment.

c. Description of Backup and Failure Protocols Inadequate

Rule 1180 requires that the plan describe procedures to respond to monitoring equipment failures.[52] This discussion must include an overview of "[t]emporary air monitoring measures that will be implemented in the event of an equipment failure."[53] Valero's plan does not meet these requirements.

Valero proposes to use the Long Beach Airport National Weather Service Station as a backup in the likelihood that "the onsite meteorological station is down for more than 96 hours."[54] Valero should be required to propose onsite alternatives to track actual conditions at the refinery, and these backup measures should be deployed where the system is down for more than 24 hours, not 96 hours. Onsite wind speed and wind direction data is critical in "interpreting the measurement results, including the transport and dispersion of air pollutants from the refinery to the community."[55] The refinery cannot rely on offsite meteorological stations that do not consider the particular effect that topography, buildings, and other local onsite factors have on the dispersion of pollutants.

Similarly, Valero commits to deploy backup air monitoring systems after the instruments are down "for more than 336 hours."[56] This wait-time is excessive and above the 24-hour required District notification.[57] The time to deploy backup measures should be reduced to about 24-hours.

Moreover, the plan states that "passive sampling" will be used as a backup to track the "majority of the pollutants."[58] The refinery must be required to create a mobile monitoring network that incorporates the optical remote sensing technology identified in the plan, or in the alternative, the plan

[50] *Jan. 11 Comments*, *supra* note 7, at 14.
[51] *Valero Plan*, *supra* note 14, at 2-9, 3-2.
[52] Rule 1180(d)(2)(D).
[53] Rule 1180(d)(2)(D)(iv).
[54] *Valero Plan*, *supra* note 14, at 3-6.
[55] *Guidelines*, *supra* note 11, at 16.
[56] *Valero Plan*, *supra* note 14, at 3-6.
[57] Rule 1180(g)(2).
[58] *Valero Plan*, *supra* note 14, at 3-6.

should elaborate on the *specific* pollutants and passive sampling technology it will implement. Valero must also provide the reasons a mobile monitoring network would be infeasible.

Finally, Valero should commit to maintaining replacement parts on site to minimize downtime. The plan should also consider other measures to address breakdowns and equipment failures as quickly as possible. These procedures will ensure minimal downtime and emissions data gaps.

d. Special Measures are Needed for Detecting MHF Releases

Because Valero is one of only two refineries in California to use one of the most deadly chemicals on earth (modified hydrogen flouride, or MHF), it is *imperative* that a detailed and sensitive monitoring plan that includes an immediate warning system be implemented.

An MHF release can go offsite in seconds. MHF goes easily through skin, and exposure can cause deep lingering burns, lung fluid, permanent lung damage, eye damage, and death.[59] MHF is corrosive and reactive with human tissue (replacing molecules in the body with fluorinated compounds).[60] MHF used at the regions' refineries is actually nearly-pure HF (only 6-7% additive),[61] and it is now well-known that *modified* hydrogen fluoride only provides a small reduction in plume dispersion during a release, compared to pure HF.[62] This chemical can form a dense vapor and aerosol cloud during a release.[63] According to U.S. EPA Risk Management Plans (RMPs), an MHF release can travel for miles – for example, a Mobil (now Torrance) RMP states 3.2 miles, and Valero's goes even farther. These distances are alarming enough, but we believe these are gross underestimates. Even within 3 miles, hazard zones include hundreds of thousands of people in the densely populated Los Angeles region.[64] Indeed, the District found higher than lethal levels can be maintained miles from the refinery.[65] This District staff presentation also describes well the severe hazards associate with the use of this unusual chemical.

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[59] *Facts About Hydrogen Fluoride (Hydrofluoric Acid)*, CENTER FOR DISEASE CONTROL AND PREVENTION, https://emergency.cdc.gov/agent/hydrofluoricacid/basics/facts.asp (last visited Feb. 5, 2019).

[60] See, e.g., Jeff Prystupa, *Fluorine—A current literature review. An NRC and ATSDR based review of safety standards for exposure to fluorine and fluorides,* Toxicology Mechanisms and Methods, 2011.

[61] *Rule 1410 Presentation for Working Group Meeting #3*, SOUTH COAST AIR QUALITY MGMT. DIST. (June 15, 2017) (slide 13 shows 6-7% additive wt.%)

[62] *Rule 1410 Presentation for Working Group Meeting #8*, SOUTH COAST AIR QUALITY MGMT. DIST. (Sept. 6, 2018) (slide 40)

[63] *Hydrogen Fluoride Study: Report to Congress Section 112(n)(6) Clean Air Act As Amended*, U.S. ENVTL. PROTECTION AGENCY, xiii (2006).

[64] *Status Updated on PR1410-Hydrogen Fluoride Storage and Use at Petroleum Refineries*, SOUTH COAST AIR QUALITY MGMT. DIST. (Sept. 22, 2018), https://www.aqmd.gov/docs/default-source/Agendas/refinery-committee/final-september-refinery-committee.pdf?sfvrsn=8 (slide 10 shows nearly 400,000 people within a 3 miles of Valero and Torrance refinery MHF alkylation units).

[65] *Status Update on PR 1410–Hydrogen Fluoride Storage and Use at Petroleum Refineries*, SOUTH COAST AIR QUALITY MGMT. DIST. (Feb 1, 2019), http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-feb1-025.pdf?sfvrsn=6 (slide 11, for example, states: *"Tests have shown lethal concentrations can travel 2 miles,"* although we believe this is actually a gross underestimate.)

We strongly support and urge phaseout of MHF as soon as possible. In the meantime, as Valero is required to monitor HF (or MHF), Valero must provide explicit information in the monitoring plan regarding offsite levels that could be reached in a worst-case potential release, in all directions surrounding the refinery, and also the *minimum* concentrations that can cause health impacts and capabilities of equipment to quickly detect these as well. Capabilities of monitoring equipment to immediately detect at the fenceline any releases that can go offsite must be provided in the plan in detail (e.g. manufacturer, specific minimum and maximum detection limits, QA/QC, backup equipment, etc.). Because the use of MHF is far more hazardous than other chemicals (even according to Dupont[66]), this chemical must be treated differently from others.

The most sensitive and reliable monitoring equipment should be sited (1) near the alkylation unit and anywhere else where MHF is used and stored, and (2) also at the fenceline.

III. Public Notification System Deficiencies

Rule 1180 requires a description of "[m]ethods for dissemination of data . . . to the public."[67] Plans must establish these methods to inform "communities near refineries when emissions exceed thresholds," but also about "planned maintenance activities or equipment failures" and the "availability of periodic reports."[68] Valero's notification system fails to meet this public disclosure requirement.

a. General Emissions Data Reporting and Notifications Updates

Valero provides for two central methods of distributing emissions data and air monitoring system notices to the public: (1) notifications and other information will be delivered by electronic mail to subscribers that affirmatively opt-in;[69] and (2) printed copies of quarterly emissions reports can be accessed at a local library in the Wilmington area.

The draft plan must be revised to provide for notifications in other forms – for example, cell phone text messages or an information line for residents that lack internet access. Additionally, outreach efforts should be made to encourage opt-ins and capture contact information at sensitive receptor locations and of local residents within 5 miles to ensure they receive appropriate notifications and other important information.

Finally, Valero should also arrange to make printed copies of periodic reports available at other local libraries, including those in the City of Long Beach. Valero should also detail how the public would

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[66] Dupont, *H_2SO_4 vs. HF*, http://www.dupont.com/content/dam/dupont/products-and-services/consulting-services-and-process-technologies/consulting-services-and-process-technologies-landing/documents/H2SO4_vs._HF.pdf ("From a safety and environmental standpoint, H2SO4 [sulfuric acid] has a clear advantage over HF . . . Both HF and H2SO4 acids are hazardous materials, however, **HF is considerably more dangerous**. . . . The volatility of the acid at ambient conditions is a chief concern. HF is a toxic, volatile gas at these conditions, while H2SO4 is a toxic liquid. Therefore, H2SO4 is much easier to contain in the event of an accidental release. The hazardous nature of both materials has been known and respected for years. **In more densely populated areas of the world, safety and environmental concerns of HF usage have given H2SO4 alkylation a notable advantage.**")

[67] Rule 1180 (d)(2)(G).

[68] *Guidelines*, *supra* note 11, at 2, 5.

[69] *Valero Plan*, *supra* note 14, at 4-1, 4-2.

be made aware of the availability of these reports. For instance, the plan should propose to mail out notices and conduct other outreach to inform the public of these reports.

b. Special Measures are Needed for Reporting MHF Releases to the Public

Because it will not be sufficient to simply post detections online or in a quarterly report or wait for individuals to look up data at their convenience, in this case where seconds and minutes count, a siren system, text messages, and other immediate outreach are the only reasonable methods to inform people that significant levels of MHF or HF have been detected at the fenceline. The plan must also incorporate immediate notification measures to inform the public traveling on the Terminal Island freeway (e.g. alert signs), in the event of an MHF release. The specific levels triggering the unique form of "outreach" necessary for this chemical must include not only high levels, but also the minimum levels which can cause any health impact offsite.

Further, a robust and specific discussion about best practices for monitoring and reporting this chemical to the public, first responders, and emergency response officials is necessary to include in the plan before approval. This additional planning must include training and outreach to inform the public about the meaning of any sirens and other alerts.

IV. Implementation of Fenceline Air Monitoring Plan Deficiencies

Rule 1180 requires that the plan detail the "[p]rocedures for implementing the fenceline air monitoring plan."[70] Although Valero admits that "[a] large amount of work remains to be done" to finalize the fenceline air monitoring system, it fails to establish a firm schedule to ensure the system is installed and operational by January 2020.[71] Instead, the plan provides a list of obstacles that will presumably delay implementation, including "lag time between order placement and order receipt," "finalize vendor selection," "engineering of the system," and "issue purchase orders."[72] As a result, Valero postpones the development of a timeline until after its plan is approved.

Valero must revise the plan to include a clear timeline for each step necessary to comply with the requirements of Rule 1180 and implement each component of its fenceline air monitoring plan. Allowing Valero to proceed without a clear implementation timeline will result in unnecessary delays and lack of accountability.

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For the reasons detailed above, the District cannot approve Valero's current draft plan. Revisions are necessary to bring this plan into compliance with the explicit requirements of Rule 1180 and applicable Guidelines. As a result, the District should revise the proposed monitoring plan and recirculate it for additional review and comment prior to final approval. The District should also hold a public forum to discuss its general findings in advance of setting a comment deadline for the revised plan.

Sincerely,

[70] Rule 1180(d)(2)(F).
[71] *Valero Plan*, *supra* note 14, at 5-1.
[72] *Id*.

Oscar Espino-Padron, Staff Attorney, Earthjustice

Julia May, Senior Scientist, Communities for a Better Environment

Al Sattler, Group Chair, Sierra Club Palos Verdes-South Bay Group

Monica Embrey, Senior Campaign Representative, Sierra Club

Taylor Thomas, Research and Policy Analyst, East Yard Communities for Environmental Justice

Olga Pikelnaya

From: Jesse Marquez <jnm4ej@yahoo.com>
Sent: Wednesday, February 6, 2019 5:50 PM
To: Andrea Polidori; Olga Pikelnaya; Rule 1180
Cc: Jesse Marquez
Subject: Ultramar/Valero Public Comments
Attachments: CFASE et al Final Public Comments - Ultramar-Valero Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan 2-6-2019.docx

Respectfully Submitted

Jesse N. Marquez

Coalition For A Safe Environment
California Kids IAQ
Community Dreams
EMERGE
American Legion Post 6
Wilmington Improvement Network
San Pedro & Peninsula Homeowners Coalition
NAACP- San Pedro-Wilmington Branch # 1069
California Communities Against Toxics
California Safe Schools
Del Amo Action Committee
Action Now
St. Philomena Social Justice Ministry

February 6, 2019

Dr. Andrea Polidori
Atmospheric Measurements Manager
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765
909-396-3283
apolidori@aqmd.gov

Dr. Olga Pikelnaya
Program Supervisor
909-396-3157
opikelnaya@aqmd.gov

Rule1180@aqmd.gov

Re: Ultramar/Valero Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan
2402 E. Anaheim St., Wilmington, CA 90744
Facility ID: 800026
Su: CFASE et al Public Comments Submission

Dear South Coast AQMD:

On behalf of the undersigned organizations we would like to submit our public comments on the Ultramar/Valero Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan.

While we recognize that the plans were prepared in response with the South Coast AQMD (SCAQMD) Rule 1180 and AB 1647 we wish to state the following for the record:

1. It is our opinion that the Ultramar/Valero Wilmington Refinery - Draft Refinery Fenceline Air Monitoring Plan does not comply with all requirements of Rule 1180, AB1647 and AB617.

2. We submit our public comments on this plan so as not to relinquish our rights and public comments regarding the inadequacies of the Draft Refinery Fenceline Air Monitoring Plan, Rule 1180 and Rule 1180 Fenceline Air Monitoring Guidelines.
3. That the SCAQMD did not adopt the majority of all requests and recommendations made by the Public, Disadvantaged Communities and Environmental Justice Communities regarding Rule 1180.
4. That the SCAQMD is aware of the adoption into law of AB617 which has additional legal requirements and will have new mandates for Fenceline Air Monitoring.
5. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent will during the AB617 Community Plan preparation, public meetings and public participation process will make new requests, recommendations and requirements that may exceed the SCAQMD Rule 1180.
6. That the Public, Disadvantaged Communities and Environmental Justice Communities we represent formally request that the SCAQMD wait until the AB617 Community Plans have been completed so that all Fenceline Air Monitoring Requirements can be incorporated into the SCAQMD Rule 1180 Fenceline Air Monitoring Plans.
7. We request that the public have an opportunity to review and comment on the Final Refinery Fenceline Air Monitoring Plan, Quality Assurance Project Plan (QAPP), Quality control Plan (QCP) and Standard Operating Procedures (SOPs).

CFASE et al Public Comments regarding compliance to the South Coast AQMD - Rule 1180 Refinery Fenceline Air Monitoring Plan Guidelines, December 2017:

Key Objectives:

1. **Provide information about various air pollutant levels (i.e., determined by air pollutant concentration) measured in real-time in durations short enough to adequately address significant emissions changes from refinery operations;**

    a. The Draft Plan does not identify all types of refinery emissions categories and chemicals that are allowed such as in the SCAQMD issued Title V Permit and what is reported annually to SCAQMD and USEPA.
    b. The Draft Plan does not include current available refinery emissions data.
    c. The Draft Plan states that data will be averaged and displayed at 5-minutes intervals which, alone, is unacceptable. The data should be reported in True Real Time, at 1-minute intervals to provide sufficient time for the community to respond and for the refinery to mitigate 10-minute emission concentrations in accordance to the Acute Exposure Guideline Level (AEGL) as specified in Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017. We are aware that the company Atmosfir Optics has an FTIR and software which has the capability of True Real Time, 1-Minute Intervals, QA Validating, PPB and reporting, averaging, reporting, and displaying data, in multiple intervals, simultaneously.
    d. The Draft Plan states in Table 3-1 that a minimum 5-Minute Detection Limit (ppb) will be used which is unacceptable. Some chemicals such as Hydrogen Fluoride are an immediate life-threatening chemical which can kill you instantly and everyone within 2 miles. We want 1-minute Detection, QA Validation and Reporting.
    e. The Draft Plan in Table 3-1 references a maximum detection limit. This is unacceptable if the amount of emissions can exceed these parameters. Refinery

should then use an additional instrument to assure that all emissions have been quantified and reported.

f. The Draft Plan data will appear on the website within 10-minutes. This is unacceptable and not True Real Time. True Real Time data should be uploaded at one-minute intervals.
g. The Draft Plan states that data will be made available via rolling 24-hour trend of the five-minute data for each gas reported which is unacceptable. We want real time data and reporting every one-minute, displaying both 1-minute and 5-minute averages.
h. The Draft Plan fails to disclose how total VOC's will be calculated. Most of the refinery emissions are alkanes, therefore, TVOC should be defined as total alkanes and should be measured, accurately, using the estimated molecular weight, presented in combination with the Total Alkanes concentrations in parts per billion, as described Method EPA/600/R-09/136, and in the EPA Guidance Document Measurement of Emission from Produced Water Ponds, October, 2009, Appendix A. This will provide the most accurate measurement of release quantities
i. True Real Time, one-minute reporting to the public to provide critical alerts, preventing contaminants from entering the community in advance of reporting. For example, a wind speed of around 2m per second at time of an event, results in contaminated air reaching a distance of 120m. In 10min, that air will move a distance of 1,200m. With refineries located very close to densely populated areas, such risks and exposure to public health are not acceptable.
j. Shorter reporting intervals will minimize the possibility of data manipulation, unauthorized software program attribute changes, and inaccurate reporting to the public. All the reporting should be subject to spectral validation in True Real Time to insure published data is accurate and precise as published. We are aware of at least one manufacturer Atmosfir Optics whose FTIR monitoring equipment and software is capable of True Real Time chemical detection, data collection, data analysis, data validation, quality control and reporting every one-minute.

2. **Gather accurate air quality and meteorological data to identify both the time(s) and location(s) of various air pollutant levels near refinery operations and provide a comparison of these levels to other pollutant levels monitored in the Basin;**

a. The Draft Plan does not include a comparison of air pollutant levels to other air pollutant levels monitored in the Basin nor does it reference other air quality studies. This important to know and to be included in the preparation of an accurate Cumulative Impact Assessment, the determination of the adequacy of selected air monitoring equipment and appropriate mitigation measures.
b. The Draft Plan does not, and must, require the minimum detection level of ppb for each type of chemical or substance as prescribed in Table 5. Emergency Exposure Levels for Chemicals Emitted from California Refineries, Analysis of Refinery Chemical Emissions and Health Effects, OEHHA Draft September 2017.
c. The Draft Plan failed to acknowledge that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances, wider dispersion and at further distances at lower ground levels thus resulting in increased public health impacts and increased risk exposure.

3. **Track long-term air pollutant levels, variations, and trends over time at or near the property boundaries of petroleum refineries and in nearby communities;**

a. The Draft Plan fails to discuss how it will track and report long term air pollutant levels, variations and trends over time. As a minimum we want 1-year, 5-year, 10-year and 20-year tracking and trend analysis reporting. We want the reports and data to reflect all exceedances of an air quality standard or public health threshold.
b. The Draft Plan fails to require True Real Time monitoring 24/7/365.
c. The Draft Plan fails to require True Real Time quality assurance, quality control and spectral validation of the real-time monitoring, data and equipment 24/7/365.
d. The Draft Plan fails to include any criteria for system availability for a 24/7/365 operation. We request a 90% availability uptime requirement. Availability will be calculated as the ratio between (100% absolute operation time, minus poor visibility conditions time, minus system idle time) divided by (100% absolute operation time). Availability criteria should be calculated and reported on a quarterly basis for every fenceline monitoring system. Availability should be evaluated quarterly and annually.
e. The Draft Plan fails to describe the Scalability of the equipment software. Will the database be able to handle the added data from all equipment over the long-term?
f. The Draft Plan fails to describe the Redundancy the equipment software. Data must be replicated across multiple servers, or, stored in cloud-based IT backup and computing power system architecture to insure continuity of data in the event of a server going down.
g. The Draft Plan fails to describe the Secure encryption and other security features. While air monitoring data are not generally considered sensitive or confidential we want to ensure that the data is protected from hackers and intruders.
h. The Draft Plan fails disclose if equipment calibration will comply with an USEPA FEM Instruments and/or FRM instruments.
i. All instruments deployed must use standard operating procedures, including calibration and Quality Control in compliance with promulgated EPA methods. If there is a technology that has an official method, such as FTIR, only, for fenceline monitoring, this technology should follow the quality control specified in the method. If there is a fenceline technology, that can achieve detection limits low enough to replace instruments operating without a promulgated method, such as UV-DOAS, such technology should be implemented. We are aware of at least one manufacturer Atmosfir Optics whose FTIR monitoring equipment and software is capable of True Real Time chemical detection, data collection, data analysis, data validation, quality control and reporting every one-minute.
j. The Draft Plan fails to assure that the original raw database cannot be deleted or altered and the original maintained. Scripts can be developed to then pull data from the database (without altering the database itself) and process the raw data for quality control purposes, data display, etc.
k. There should be long-term data and trend analysis of short emissions of chemicals and substances. Short term releases can be a significant cause of public emergency visits and premature deaths.
l. The Draft Plan fails to include any requirements or penalties when a trend discloses an increase in emissions.

m. The Draft Plan fails to require the SCAQMD to post on-line all Flaring emission incidents information. For example, the SCAQMD use to post on-line information on the number of Planned Flare Events vs Unplanned Flaring Events which has now been removed from their website. CFASE had discovered that the number of Unplanned Flaring Events had exceeded the number of Planned Flaring Events and that the emissions from Unplanned Flaring Events exceeded the annual reported emissions.
n. Monitoring equipment must remain operational as consistently as technology will allow. We are aware of at least one manufacturer Atmosfir Optics whose FTIR monitoring equipment and software is capable of achieving a 90% availability uptime.

4. **Provide context to the data so that local communities can distinguish air quality in their location from other locations in the Basin and understand the potential health impacts associated with local air quality near petroleum refinery operations;**

a. The Draft Plan fails to acknowledge that specific chemicals and substances have different risk levels.
b. The Draft Plan fails to include specific chemical and substances public safety detection levels necessary to comply with all risk levels. Such as included in the OEHHA Chemical Database which includes, Cancer Risk, Air-Acute RELs,8-Hour RELs, Chronic REl, Safe Harbor Levels etc..
c. The Draft Plan does not state or assure that all detection limits will meet state and federal re Plan does not state or assure that all detection limits will meet state and federal regulatory requirements. The Acrolein MDL is higher than the 1-hour REL threshold as defined by regulators. All targeted compounds should be measured based on MDLs (Minimum Detection Limits) which are less than the regulatory requirement, as published by the OEHHA. Need to be able to measure and report Acrolein MDL's based on the OEHHA regulatory requirement of less than 1.0 (PPB), one-hour acute measurement. Acrolein MDL criteria should be based on OEHHA 2017 thresholds. The public cannot be exposed to more than 1ppb for one hour.

The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero.

d. The Draft Plan fails to include specific information on the potential and actual public health impacts from exposure to specific chemicals and substances such as Reproductive, Cognitive, Neurological, Cardiovascular, Physical Development, Endocrine Disorders, Immune Death etc..
e. The Draft Plan fails to include specific information on the individual and cumulative impact from exposure to chemicals which are categorized as an immediately dangerous to life or health condition.
f. The Draft Plan fails to include specific information on where and how specific chemicals and substances are used in manufacturing and in products. Such as in plastic products, packaging, preservatives, detergents, dyes, resins, flavoring agents, solvents, pesticides, herbicides etc..

g. The Draft Plan fails to include specific information on how the public can be exposed such as through breathing inhalation and skin dermal absorption.
h. The Draft Plan fails to include specific information on how OEHHA developed Child Specific Reference Doses (chRDs) for seventy-eight chemical contaminants to be of greatest concern at school sites for causing adverse effects in children.
i. The Draft Plan fails to reference that NOAA Office of Response and Restoration and The National Institute of Occupational Safety and Health (NIOSH) defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

5. **Provide a notification system for communities near refineries when emissions exceed thresholds (e.g., RELs); and**

a. The Draft Plan fails to adequately describe its public notification system.
b. The Draft Plan include all chemical and substances RELs (Recommended Exposure Level) to allow the public to know that a refinery emission exceeds a threshold.
c. The Draft Plan fails to include True Real Time air monitoring equipment that can detect chemical and substances at ppb levels in One-Minute Intervals, QA Validation and Reporting.
d. One-Minute Intervals, QA Validation and Reporting are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

6. **Provide quarterly reports summarizing the measurements, data completeness, and quality assurance.**

a. The Draft Plan fails to provide adequate information that will be provided in quarterly reports such as the number of times an air quality standard has been exceeded and when a threshold has been exceeded.
b. The Draft Plan fails to require a Root Cause Analysis to be included in the report for every exceedance of a California State or Federal Air Quality Standard and/or REL.

The Air Monitoring Plan Shall Include Detailed Information For The Following:

1. **An evaluation of routine emission sources at the refinery (e.g., utilizing remote sensing or other measurement techniques or modeling studies, such as those used for health risk assessments);**

a. The Draft Plan fails to include a definition of routine emissions. The Draft Plan does not contain information on the number of unplanned releases and malfunctions in the past and worst case release data so that the public can evaluate the adequacy of the Draft Plan. The definition shall include all chemical and substance emissions identified in the Title V Permit and which are reported annually to the SCAQMD and US EPA.
b. The reporting of unplanned equipment failures 2 hours after discovery is unacceptable. The refinery is aware within minutes of any equipment failure.

Reporting shall follow our proposed Public Notification System which is included in these comments.

c. We request a detailed description of how the FTIR and UV-DOAS can substitute for each other and be a back-up for each other for all fenceline distances. The waiting of 24hrs is unacceptable to maintain 24/7/365 True Real Time Monitoring. The refinery should have a Contingency Plan with a manufacturer or distributer for the immediate replacement of a FTIR or UV-DOAS.
d. If the FTIR or UV-DOAS are both inoperable the waiting of 336 hours for replacements unacceptable. The refinery should have a Contingency Plan with a manufacturer or distributer for the immediate replacement of an FTIR or UV-DOAS.
e. The proposed Long Beach Airport National Weather Service Station (KLGB) will act as the backup monitoring system if the onsite meteorological station is down for more than 96 hours is unacceptable. The refinery should have a Contingency Plan with a manufacturer or distributer or KLGB to be online within 1 hour.
f. The Draft Plan does not include and address categories of chemicals and substances such as PAH's (Polycyclic Aromatic Hydrocarbons), POM's (Polycyclic Organic Matter), HAPs (Hazardous Air Pollutants)/TACs (Toxic Air Pollutants).
g. The Draft Plan does not include a comprehensive list of all chemical's within a category such as VOC's.
h. The Draft Plan fails to require that all chemicals and substances will be monitored, measured and reported.
i. The Draft Plan fails to include a list of all equipment, software and programing attributes that will be used to monitor all chemical and substance emissions.

2. **An analysis of the distribution of operations and processes within the refinery to determine potential emission sources;**

a. The Draft Plan failed to require the identification of all equipment malfunctions, breakdowns and power failures which have occurred in the past at the refinery. Information must also include past NOVs.
b. The Draft Plan contains no Root Cause Analysis or Trend Analysis of past historical emissions and incidents.
c. The Draft Plan contains no Worst-Case Scenarios and Contingency Plan due to natural disasters, power failures and acts of terrorism.

3. **An assessment of air pollutant distribution in surrounding communities (e.g., mobile surveys, gradient measurements, and/or modeling studies used for health risk assessments);**

a. The Dispersion Modeling information provided in not representative of the worst-case scenario emissions of the refinery. It was a Health Risk Assessment based on 1-2 years emissions in which there was no major malfunction, breakdown or flaring event.
b. We request an explanation as to why Ultramar/Valero's Seasonal Wind Roses are significantly different than other refineries within a few miles.
c. One-minute real time reporting intervals, dispersion maps and illustrations are specifically needed for chemicals known to be classified as immediately dangerous to life or health condition.

NIOSH defines an immediately dangerous to life or health condition as a situation "that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."

d. The Draft Plan failed to acknowledge and address that Atmospheric Inversions occur on a regular basis in the San Pedro Bay Harbor area, which results in higher concentration levels of chemicals and substances at lower ground levels and a further distribution thus resulting in increased public health impacts and increased risk exposure.

4. **A summary of fenceline air monitoring instruments and ancillary equipment that are proposed to continuously measure, monitor, record, and report air pollutant levels in real-time near the petroleum refinery facility perimeter (i.e., fenceline);**

The Draft Plan failed to include an Addendum which lists the specific equipment manufacturer, model number, software program and preprogramed attributes that the refinery plans to use that the public can review and comment.

5. **A summary of instrument specifications, detectable pollutants, minimum and maximum detection limits for all air monitoring instruments;**

a. The Draft Plan fails to require all monitoring equipment to be capable of detecting emission limits as low as ppb, our requested detection level.
b. The Draft Plan fails to disclose if monitoring equipment can report in real-time in one-minute intervals, our requested time interval.
c. The Draft Plan fails to address if selected equipment will require heaters and fans due to weather temperature and humidity changes. Can the air monitoring equipment be impacted by insects, birds and mammals?
d. The Draft Plan fails to address if selected equipment will require stabilizers and shock absorbers to accommodate earthquakes and ground movement. Does the facility exist on-top of a known earthquake fault, built on filled-in land and could it be impacted by land subsidence or liquid faction? Will sitting have to be inspected and adjusted after every earthquake or every year due to land movement? We request that all types of air monitoring equipment and supporting equipment be inspected from all potential negative impacts and be included in all Inspection Plan Checklists and Maintenance Plan Schedules.

6. **Proposed monitoring equipment siting and selected pathways (when applicable) for fenceline instruments, including the justification for selecting specific locations based on the assessments mentioned above;**

a. The Draft Plan fails to include information that highlights exceedance of air quality standard, public health standards, public safety requirements and mitigation taken.
b. The Draft Plan fails to require a Root Cause Analysis to be included in the report for every exceedance of a California State or Federal Air Quality Standard, MDL and/or REL.

a. The Draft Plan fails to explain if the proposed or selected equipment can accommodate the proposed measuring distances. Most FTIR's have a 500' maximum distance. Weak signals and weather conditions can significantly affect the accuracy of data or even the ability to take measurements and collect data.
b. Although some fenceline areas may not have fenceline or nearby residents they do expose the public to their toxic emissions.
c. The Draft Plan failed to identify that there are Live-In Boat Owners in Consolidated Slip which is less than 100' from Ultramar/Valero. It also does not provide any data regarding recreational boater's usage of the 5-6 marinas especially on weekends and holidays.
d. The Draft Plan failed to include sensitive receptors at the Apostolic Faith Church and School, East Wilmington Greenbelt Park, East Wilmington Greenbelt Community Center and ILWU Dispatch Hall.

7. **Operation and maintenance requirements for the proposed monitoring systems;**

a. The Draft Plan failed to include an Addendum which included the detailed Operation and Maintenance Plan & Procedures that the public can review and comment.
b. The Operation and Maintenance Plan & Procedures must be capable of supporting a

8. **An implementation schedule consistent with the requirements of Rule 1180;**

The Draft Plan failed to include an Implementation Plan and Schedule. We also request that it include, QAAP, QCP, SOPs and Assessments that we have identified in these public comments.

9. **Procedures for implementing quality assurance and quality control of data**;

a. The Draft Plan fails to state what EPA QA/QC procedures, methods or guidelines they will follow.
b. The Draft Plan fails to state what real time quality control on the measurement process will be used. Calculating the atmospheric levels (for each and every measurement) against the known atmospheric level can be used as a real time quality check of the measurement process. We request the use of constant atmospheric gases such as N_2O.
c. The Draft Plan fails to include a real time quality control process (for each and every measurement) based on an effective correlation, Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra method in order to minimize false positive and false negative measurements.
d. The Draft Plan fails to state that the public and AQMD will have access to all quality control data, formulas, validation and process information.
e. The Draft Plan fails to include a real time spectral validation process for each chemical and substance. The public and AQMD shall have access to all real time spectral validation checks on a real time basis.
f. The Draft Plan states that," all data exceeding a threshold will be qualified as preliminary subject to manual QA/QC review for quarterly report," is unacceptable. Data QA/QC should be in real time and within one-minute. Suspected release data

should be reviewed and confirmed within minutes to protect the health and safety of community. The public cannot wait days or months for confirmed data.

g. The Draft Plan failed to include an Addendum which included the detailed Quality Assurance Project Pan (QAPP), Quality Control Plan & Standard Operating Procedures (SOPs) that the public can review and comment. The included outline is not adequate for a comprehensive assessment by the public.
h. The Draft Plan does not include a real time, validated data reporting procedure to public. The Draft Plan suggests monthly validation of data, not real time validation of reported data to the public which is unacceptable. The Draft Plan suggests conducting continuous real-time validation checks of measurements using two methods for quantification but fails to disclose the two methods will be used.
i. Fenceline monitoring systems are projected to generate enormous amount of data. We estimate that each refinery will generate over 1 million measurements per month, which cannot be done by a person or team of people. This means that there will be a need to deploy full automatic quality control procedures in order to be able to provide online validation for all real time reported data. The Public is entitled to receive real time checked and validated information which will generate minimum false negative / positive alarms.
j. We suggest 6 times Sigma (signal to noise level to be reported) to be the effective criteria for screening out measurements out of reported data. Need to apply real time quality control checks on the signal strength for each and every single measurement. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
k. Effective criteria for screening out false negative and false positive measurements from reported data must be utilized. We are aware of at least one solution provider which can meet the following capabilities for effective real time Quality Control should procedures, which include:
    1. Spectral validation, utilizing automated comparison of measured spectra to known library reference spectra.
    2. A Signal strength quality control procedure. Real time quality control checks on the signal strength for each and every single measurement must be applied. Signal strength can be impacted by fog, rain, dirty lens, dirty reflector and aging equipment. There is a need to ensure sufficient signal strength in order to enable valid measurements.
    3. Real time quality control on the measurement process, utilizing known concentrations of an atmospheric gas, such as N_2O detection and real time comparison to the known atmospheric values.
    4. Real time alarms when instruments are out of compliance.
    5. Real time MDL calculation.
    6. Regulator and Third Party Validator access to all quality control processes, such as real time spectral validations and control checks on a real time basis.

10. **A web-based system for disseminating information collected by the fenceline air monitoring system;**

We request that the proposed web-based system be described in detail with screen shots and tables so that the public can determine the adequacy of the website and its information contents.

11. **Details of the proposed public notification system; and**

a. Our collaborative wishes to propose the following regarding public notification:

Types of Public Notification

Tier I Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to Cause Immediate Death (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 1 minute from detection.

Tier II Emergency. Incident that poses a threat of exposure to airborne contaminants when that exposure is likely to cause immediate or delayed Permanent Adverse Health Effects (Public Health & Safety Threshold Exceeded/Natural Disaster)

No longer than 5 minutes from detection.

Tier III Equipment Failure or Malfunction, Power Failure, Weather Impact, Internet Outage etc.

No longer than 10 minutes from detection.

Tier IV The posting of new information such as Report Availability, Planned Maintenance, New Equipment Purchase, Public Tour etc.

No longer than 1 hour after availability.

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

b. Methods of Public Notification

Emergency (In order of priority)

a. Direct Phone Call To Home or Residence
b. Direct Phone Call To Cell Phone
c. Direct Phone Call To Designated Person/Guardian
d. Direct Phone Call To Work or Field Location
e. Text Message To Cell Phone
f. Community Door-to-Door Advisement
g. Facility Public Loud Audio Announcement
h. Facility Public Loud Audio Alarm
i. Off-Site Public Location Loud Audio Announcement

j. Off-Site Public Location Loud Audio Alarm
k. Drone Aerial Loud Audio Announcement/Alarm
l. Mobile Vehicle Speaker Announcement
m. Police/Emergency Response Vehicle Speaker Announcement

Non-Emergency (In order of priority)

a. Personal Email
b. Identified Listed Social Media
c. US Postal Mail
d. Door-to-Door Drop-Off

Additional information could be added based on public comments, public meetings and a review of existing public notification systems in operation etc.

c. We want real time sampling, reporting and public notification based on one-minute interval collected data. Consistent with the intent of Rule 1180, refineries should be obligated to report data to the public based on True Real Time standards, no greater than 1 minute from detection.
d. Residents need to have the earliest possible warning to be able to safely evacuate in time and/or to prepare to shelter-in-place.

12. **Demonstration of independent oversight.**

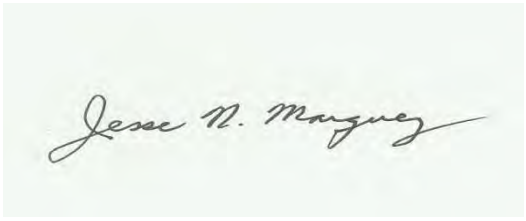
The Draft Plan failed to include an Independent Oversight Plan and identify an Independent 3rd Party Monitor.

CFASE et al Public Comments regarding the South Coast AMD - Rule 1180 compliance to AB1647 (Muratsuchi) Petroleum Refineries: Air Monitoring Systems, October 8, 2017:

a. Rule1180 does not comply with AB1647 Section 42705.6 (a) (1) definition of. “Refinery-Related Community Air Monitoring System,” because the Draft Plan does not identify all categories of sensitive receptor locations near the refinery. As some example, there is a Child Care Center, Children, Senior Citizen Residents, Pregnant Women and Residents With Pre-Existing Health Conditions fenceline to the refinery.
b. Rule1180 does not comply with AB1647 Section 42705.6 (d) The district and the owner or operator of a petroleum refinery shall collect real-time data from the refinery-related community air monitoring system and the fence-line monitoring system and shall maintain records of that data. To the extent feasible, the data generated by these systems shall be provided to the public as quickly as possible in a publicly accessible format.

For any questions or information please send all correspondence or questions to me as principal contact regarding these public comments.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744
jnm4ej@yahoo.com
310-590-0177

Ricardo Pulido
Executive Director
Community Dreams
1601 N. Wilmington Blvd., Ste. B3
Wilmington, CA 90744
mr.rpulido@gmail.com
310-567-0748

Magali Sanchez-Hall, MPH
Executive Director
EMERGE
913 East O Street
Wilmington, CA 90744
mssanchezhall7@gmail.com
646-436-0306

Chaplain Anthony Quezada
American Legion Post 6
1927 E. Plymouth St.
Long Beach, CA 90810
m.in.usa.aq@gmail.com
310-466-2724

Anabell Romero Chavez
Wilmington Improvement Network
Board Member
1239 Ronan Ave.
Wilmington, CA 90744
anab3ll310@yahoo.com
310-940-4515

Dr. John G. Miller, MD
San Pedro & Peninsula Homeowners Coalition
President
1479 Paseo Del Mar
San Pedro, CA 90731
igornla@cox.net
310-548-4420

Joe R. Gatlin
Vice President
NAACP
San Pedro-Wilmington Branch # 1069
225 S. Cabrillo Ave.
San Pedro, CA 90731
joergatlin45k@gmail.com
310-766-5399

Modesta Pulido
Chairperson
St. Philomena Social Justice Ministry
22106 Gulf Ave.
Carson, CA 90745
vdepulido@gmail.com
310-513-1178

Drew Wood
Executive Director
California Kids IAQ
1601 N. Wilmington Blvd., Ste. B4
Wilmington, CA 90744
californiakidsiaq@gmail.com
916-616-5913

Robina Suwol
Executive Director
California Safe Schools
P.O. Box 2756
Toluca Lake, CA 91610
robinasuwol@earthlink.net
818-261-7965

FW: SCAQMD Rule 1180 Valero Wilmington Refinery Fenceline Monitoring Plan is Available for Public Comment

Olga Pikelnaya
Tue 3/26/2019 2:56 PM
To: Olga Pikelnaya <opikelnaya@aqmd.gov>

From: Pearson, Charles@ARB [mailto:charles.pearson@arb.ca.gov]
Sent: Thursday, February 7, 2019 2:30 PM
To: Olga Pikelnaya <opikelnaya@aqmd.gov>
Cc: Benne , Russ@ARB <russ.benne @arb.ca.gov>; Stroud, Kenneth@ARB <kenneth.stroud@arb.ca.gov>
Subject: SCAQMD Rule 1180 Valero Wilmington Refinery Fenceline Monitoring Plan is Available for Public Comment

Hi Olga,

CARB's Monitoring and Laboratory Division was asked by our management to review and offer comments on the remainder of SCAQMD's Refinery Fenceline Monitoring Plans. We understand we missed the deadline for the public comment periods. Please find below our comments and a summary matrix we used for our review. We hope you find our comments useful.

COMMENTS:

- Both the Valero and Tesoro public websites do not provide informa on on the local emergency preparedness/response agencies with jurisdic on over the refinery.
- The monitoring plans method of opt-in for the no fica on feature does give the transi ng public, residents, and surrounding non refinery business the ability to receive messages when health/safety values are exceeded at the point of measurement. Instead, the refineries are proposing to provide no fica ons at the point of the nearest residence based on some frac on of the known health/safety values measured at the fence line. The approach proposed by the refineries does not meet the intent of AB 1647, AB 617, and REAMAR second objec ve report recommenda ons, as well as having the following disadvantages:
    - The surrounding public and non-refinery workers are deprived of mely no fica ons to inform their own protec ve ac ons they can take absent mely no fica ons from the refineries and local response agencies.
    - The surrounding public and non-refinery workers are deprived on all of the informa on they should have to assess the cumula ve health impacts from the refineries and other non-refinery facili es near them.
    - Local response agencies are deprived of a valuable tool to maintain situa onal awareness of facili es to be er serve the surrounding non-refinery workers/public under their protec on.
    - Local environmental health agencies are deprived of a valuable tool to manage the non-rou ne and fugi ve emissions from these facili es.

We also recommend that:

- SCAQMD require the refineries to provide informa on on the local emergency preparedness/response agencies with jurisdic on over the refinery.
- SCAQMD work with OEHHA to apply all known health and safety values in the OEHHA report to emissions at the refinery's fencelines. I would suggest, as a star ng point, that appropriate rolling averages that match the values me period should be applied in real me at the point of measurement and used to generate the opt-in no fica ons. For example, one hour rolling averages for hourly values, all the way to an annual rolling average for values based on a year's exposure.

Thank you
Charles Pearson, Manager
California Air Resources Board
Monitoring and Laboratory Divison
Incident Air Monitoring Sec on

Summary of SCAQMD Fenceline Air Monitoring Plans		
Refinery	**Valero**	**Tesoro Carson/Wilmington**
Purpose of monitoring	To con nuously monitor air quality at or near the property boundaries and provide the data to the public, local response agencies, and SCAQMD as expedi ously as possible.	Establish air monitoring systems at facility perimeters (fence lines) to measure pollutant concentra ons and provide the public with near real-me informa on about air quality near the refinery.
Con nuously monitoring equipment	Three sampling systems comprising 5 FTIR/UV-DOAS open paths and three UV fluorescence H2S analyzer/aethalometer point systems measuring the en re suite of Rule 1180 target compounds. Black carbon cannot be measured with FTIR or UV-DOAS, so aethalometers will be used for this purpose. For hydrogen sulfide, dedicated UV-Fluorescence analyzers will be u lized.	Thirteen open-path FTIR and UVDOAS instruments, as well as point monitors for hydrogen sulfide (H2S) and black carbon.
Equipment si ng	Fenceline sampling loca ons have been selected with a variety of goals and constraints in mind taking into account numerous prac cal limita ons constraining fenceline monitoring loca on selec on.	Open-path measurements wherever possible, point measurements are proposed only for diesel par culate ma er (using black carbon as a surrogate) and Hydrogen sulfide. The selec on of monitoring loca ons and instrument types was based on the emissions characteris cs, loca ons of sensi ve receptors, dispersion modeling results, and several si ng challenges unique to the refinery.
Rou ne maintenance requirements	Rou ne maintenance will be in the as yet to be published QAPP.	Overview of planned rou ne maintenance provided. Detailed QAPP to be provided when equipment vendors are selected.
Temporary monitoring plan during instrument maintenance and failure	Details of rou ne maintenance and failure management will be in the yet to be published QAPP. Brief overview of equipment malfunc on no fica on procedures and back up monitoring provided.	Refinery proposes to submit Quality Assurance Project Plan (QAPP) and associated SOPs a. er they finalize vendor/instrument selec on and before commencing fenceline monitoring on January 1, 2020.
Data management, QA/QC procedures, and audit	Overview of data management procedures provided in dra plan. QA/QC procedures not provided in dra plan, but will be available to the public on-line and in the quarterly reports.	Plan describes Data management, QA/QC, and audit procedures.
Fenceline monitoring plan	See descrip on of con nuously monitoring equipment above.	See descrip on of con nuously monitoring equipment above.
Data dissemina on methods	Data disseminated to public via real me website with context of measurements, concentra ons, pollutant background, educa onal materials, and health/safety effects provided. No informa on on the local emergency preparedness/response agency with jurisdic on over the refinery given.	Data dissemina on will be accomplished using a public-facing website that is linked to the data management system (DMS). The home page of the public-facing website will be dedicated to providing background on reasons the monitoring is taking place and the type of technology being used in the monitoring system. A “Resources” page will include web links to Rule 1180/guidance and other publically available related informa on. A frequently asked ques ons (FAQ) page will describe the nature of real-me / non-real- me data. No informa on on the local emergency preparedness/response agency with jurisdic on over the refinery given.
Public no fica on	Via website and opt-in no fica ons; however, Rule 1401 Guidance Table 7.1 was used as the basis for the no fica on thresholds. The refinery jus fied this methodology since there are no residen al or sensi ve receptors at the fenceline of the refinery and believes this approach offers a be er representa on of the data versus the exposure levels to the public. The published Acute RELs were used from EPA	Air quality no fica on will be via a system through which the public can choose to be no fied when certain pollutant concentra ons exceed pre-configured thresholds calculated as some frac on of the actual fence line measurement at the closest downwind residen al area. The public can also sign up for no fica ons of new data reports and monitoring system status. The system will provide the flexibility to add manual alerts and expand to other pollutants and parameters in the future.

	and OEHHA thresholds in parts per million (ppm). The closest downwind residen al area of approximately 750 m was used at 25 m of the Refinery fenceline. No fica ons threshold data will display the calculated 1-hour rolling weighted average at the refinery fenceline rela ve to the closest residen al and sensi ve receptors. Does not have reference to the local response agency for unplanned releases.	
Quality Assurance Project Plan (QAPP)	Not provided.	Refinery proposes to submit Quality Assurance Project Plan (QAPP) and associated SOPs a er they finalize vendor/instrument selec on and before commencing fenceline monitoring on January 1, 2020.
Overall Comments	All Rule 1180 pollutants, including HF, addressed in monitoring plan. QAPP not available for review. Public no fica on does not provide informa on on the local emergency preparedness/response agency with jurisdic on over the refinery. Method of opt in no fica on does give the transi ng public, residences, and surrounding non refinery business to choose to take their own protec ve measures during an unplanned release or assess the long term cumula ve health impact from this facility and surrounding non-refinery emissions sources.	All Rule 1180 pollutants, excluding HF (not used at this refinery), addressed in monitoring plan. QAPP not available for review. Public no fica on does not provide informa on on the local emergency preparedness/response agency with jurisdic on over the refinery. Method of opt in no fica on does give the transi ng public, residences, and surrounding non refinery business to choose to take their own protec ve measures during an unplanned release or assess the long term cumula ve health impact from this facility and surrounding non-refinery emissions sources.

Olga Pikelnaya

From: Bennett, Russ@ARB <russ.bennett@arb.ca.gov>
Sent: Thursday, February 7, 2019 2:46 PM
To: Pearson, Charles@ARB; Olga Pikelnaya
Cc: Stroud, Kenneth@ARB
Subject: RE: SCAQMD Rule 1180 Valero Wilmington Refinery Fenceline Monitoring Plan is Available for Public Comment

All,

My apologies, I caught a typo in the source material provided for this email. The first sentence in second hyphenated comment below should read (added text in red):

- The monitoring plans method of opt-in for the notification feature does not give the transiting public, residents, and surrounding non refinery business the ability to receive messages when health/safety values are exceeded at the point of measurement. Instead,…

Thank You,

Russ Bennett
Incident Air Monitoring Section
Monitoring & Laboratory Division
California Air Resources Board
(916) 324-1149 (office)
(916) 206-1771 (cell)
russ.bennett@arb.ca.gov

From: Pearson, Charles@ARB <charles.pearson@arb.ca.gov>
Sent: Thursday, February 7, 2019 2:30 PM
To: Olga Pikelnaya <opikelnaya@aqmd.gov>
Cc: Bennett, Russ@ARB <russ.bennett@arb.ca.gov>; Stroud, Kenneth@ARB <kenneth.stroud@arb.ca.gov>
Subject: SCAQMD Rule 1180 Valero Wilmington Refinery Fenceline Monitoring Plan is Available for Public Comment

Hi Olga,

CARB's Monitoring and Laboratory Division was asked by our management to review and offer comments on the remainder of SCAQMD's Refinery Fenceline Monitoring Plans. We understand we missed the deadline for the public comment periods. Please find below our comments and a summary matrix we used for our review. We hope you find our comments useful.

COMMENTS:

- Both the Valero and Tesoro public websites do not provide information on the local emergency preparedness/response agencies with jurisdiction over the refinery.
- The monitoring plans method of opt-in for the notification feature does give the transiting public, residents, and surrounding non refinery business the ability to receive messages when health/safety values are exceeded at the point of measurement. Instead, the refineries are proposing to provide notifications at the point of the nearest residence based on some fraction of the known health/safety values measured at the fence line. The approach proposed by the refineries does not meet the intent of AB 1647, AB 617, and REAMAR second objective report recommendations, as well as having the following disadvantages:
    - The surrounding public and non-refinery workers are deprived of timely notifications to inform their own protective actions they can take absent timely notifications from the refineries and local response agencies.
    - The surrounding public and non-refinery workers are deprived on all of the information they should have to assess the cumulative health impacts from the refineries and other non-refinery facilities near them.
    - Local response agencies are deprived of a valuable tool to maintain situational awareness of facilities to better serve the surrounding non-refinery workers/public under their protection.
    - Local environmental health agencies are deprived of a valuable tool to manage the non-routine and fugitive emissions from these facilities.

We also recommend that:
- SCAQMD require the refineries to provide information on the local emergency preparedness/response agencies with jurisdiction over the refinery.
- SCAQMD work with OEHHA to apply all known health and safety values in the OEHHA report to emissions at the refinery's fencelines. I would suggest, as a starting point, that appropriate rolling averages that match the values time period should be applied in real time at the point of measurement and used to generate the opt-in notifications. For example, one hour rolling averages for hourly values, all the way to an annual rolling average for values based on a year's exposure.

Thank you
Charles Pearson, Manager
California Air Resources Board
Monitoring and Laboratory Divison
Incident Air Monitoring Section

Summary of SCAQMD Fenceline Air Monitoring Plans		
Refinery	**Valero**	
Purpose of monitoring	To continuously monitor air quality at or near the property boundaries and provide the data to the public, local response agencies, and SCAQMD as expeditiously as possible.	Establish a measure p time inform

Continuously monitoring equipment	Three sampling systems comprising 5 FTIR/UV-DOAS open paths and three UV fluorescence H2S analyzer/aethalometer point systems measuring the entire suite of Rule 1180 target compounds. Black carbon cannot be measured with FTIR or UV-DOAS, so aethalometers will be used for this purpose. For hydrogen sulfide, dedicated UV-Fluorescence analyzers will be utilized.	Thirteen c monitors fo
Equipment siting	Fenceline sampling locations have been selected with a variety of goals and constraints in mind taking into account numerous practical limitations constraining fenceline monitoring location selection.	Open-path proposed surrogate) and instrur of sensitiv challenges
Routine maintenance requirements	Routine maintenance will be in the as yet to be published QAPP.	Overview c provided w
Temporary monitoring plan during instrument maintenance and failure	Details of routine maintenance and failure management will be in the yet to be published QAPP. Brief overview of equipment malfunction notification procedures and back up monitoring provided.	Refinery pr associated commenci
Data management, QA/QC procedures, and audit	Overview of data management procedures provided in draft plan. QA/QC procedures not provided in draft plan, but will be available to the public on-line and in the quarterly reports.	Plan descri
Fenceline monitoring plan	See description of continuously monitoring equipment above.	See descrip
Data dissemination methods	Data disseminated to public via real time website with context of measurements, concentrations, pollutant background, educational materials, and health/safety effects provided. No information on the local emergency preparedness/response agency with jurisdiction over the refinery given.	Data disser is linked to public-faci the monito monitoring 1180/guida frequently / non-rea preparedn
Public notification	Via website and opt-in notifications; however, Rule 1401 Guidance Table 7.1 was used as the basis for the notification thresholds. The refinery justified this methodology since there are no residential or sensitive receptors at the fenceline of the refinery and believes this approach offers a better representation of the data versus the exposure levels to the public. The published Acute RELs were used from EPA and OEHHA thresholds in parts per million (ppm). The closest downwind residential area of approximately 750 m was used at 25 m of the Refinery fenceline. Notifications threshold data will display the calculated 1-hour rolling weighted average at the refinery fenceline relative to the closest	Air quality choose to configured measurem sign up fo status. Th expand to

	residential and sensitive receptors. Does not have reference to the local response agency for unplanned releases.	
Quality Assurance Project Plan (QAPP)	Not provided.	Refinery pr associated commenci
Overall Comments	All Rule 1180 pollutants, including HF, addressed in monitoring plan. QAPP not available for review. Public notification does not provide information on the local emergency preparedness/response agency with jurisdiction over the refinery. Method of opt in notification does give the transiting public, residences, and surrounding non refinery business to choose to take their own protective measures during an unplanned release or assess the long term cumulative health impact from this facility and surrounding non-refinery emissions sources.	All Rule 118 in monitori not provid agency wit does give t business t unplanned this facility

Olga Pikelnaya

From: Al Sattler <alsattler@igc.org>
Sent: Thursday, February 7, 2019 3:11 PM
To: Rule 1180
Subject: Late comment for Valero Fenceline Monitoring draft plan

February 7, 2019

VIA: ELECTRONIC MAIL ONLY
(Rule1180@aqmd.gov)

South Coast Air Quality Management District
Attn: Dr. Andrea Polidori

Atmospheric Measurements Manager

21865 Copley Drive

Diamond Bar, CA 91765

Dr. Polidori:

A late comment for the Wilmington Valero Refinery draft fenceline monitoring plan:

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For areas downwind of locations where large quantities of hydrofluoric acid (HF) and/or modified hydrofluoric acid (MHF) are present, fenceline monitoring specific for HF/MHF should be done within 8 feet of the ground.
This would be to detect a catastrophic release of HF/MHF.

Reference: AQMD Staff Presentation for Feb 1. AQMD Board meeting
http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-feb1-025.pdf?sfvrsn=6

Slide 10
Goldfish Study Test 1
(HF release in desert)
"Ground hugging cloud upon release
Maximum concentration below 8 feet within breathing height"

Alfred Sattler
Chair
Palos Verdes-South Bay Regional Group
Sierra Club

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(I realize that it is after the comment deadline for the Valero draft plan, but I hope this comment can be accepted.
[In reviewing the Staff Presentation last night, I saw this slide about the ground hugging cloud of HF, and realized that it was very relevant to fenceline monitoring for HF.]
Of course, this comment is also relevant for the Torrance PBF refinery"s draft fenceline monitoring plan, but the deadline for that passed some time ago.)