Proposed Amended Rule 1180 (PAR 1180)

Major Petroleum Refinery Fenceline and Community Air Monitoring

Proposed Rule 1180.1 (PR 1180.1)

Other Refinery Fenceline and Community Air Monitoring

Working Group Meeting #2
April 19, 2023, 10:00 AM (PDT)

South Coast AQMD

Join Zoom Webinar Meeting:
https://scaqmd.zoom.us/j/93729802015
Webinar Meeting ID: 937 2980 2015

Agenda

- Background
- Progress of Rule Development
- Applicability
- Compound List
- Community Air Monitoring
- Additional Considerations
- Rule Language

Background on Refinery Fenceline and Community Air Monitoring

Assembly Bill 1647 (October 8, 2017), required to add Section 42705.6 to the California Health and Safety Code (H&SC)

Section 42705.6 of the H&SC requires air districts and refineries to install, operate, and maintain a refinery related community and a fenceline air monitoring system on or before January 1, 2020

South Coast AQMD Rule 1180 – Refinery Community and Fenceline Air Monitoring was adopted on December 1, 2017

- Applicable to petroleum refineries that process more than 40,000 barrels per day (bpd) of crude oil
- Requires facilities to submit a plan and conduct real-time fenceline monitoring for specific compounds
- Requires a fee to cover the cost for the South Coast AQMD to install, operate and maintain community air monitoring systems

Refinery Air Monitoring Rules and Litigation

In 2022, a lawsuit against South Coast AQMD claimed that for at least three refineries with capacities below 40,000 bpd, the air district failed to:

- Install a community air monitoring system near each refinery
- Prepare refinery fenceline and community air monitoring guidance documents
- Require fenceline monitoring for each refinery due to the 40,000-bpd exemption
- Collect fees for community air monitoring systems from each refinery

In 2020, San Joaquin Valley Air Pollution Control District (SJV APCD) was sued for its Rules 4460 and 3200. The rules exempted:

- Petroleum refineries not currently refining crude oil
- Facilities with refining capacity of 40,000 bpd or less from certain monitoring

On November 3, 2021, after two of the five petroleum refineries submitted permit applications to modify the facility operation to process alternative feedstocks to produce renewable products, Bay Area Air Quality Management District (BAAQMD) amended Regulation 12 Rule 15 to:

- Define “Refinery” instead of “Petroleum Refinery,” and
- Include “alternative feedstock” to the definition of “Refinery”

Progress of Rule Development

Summary of working group meeting #1 (01/25/2023)

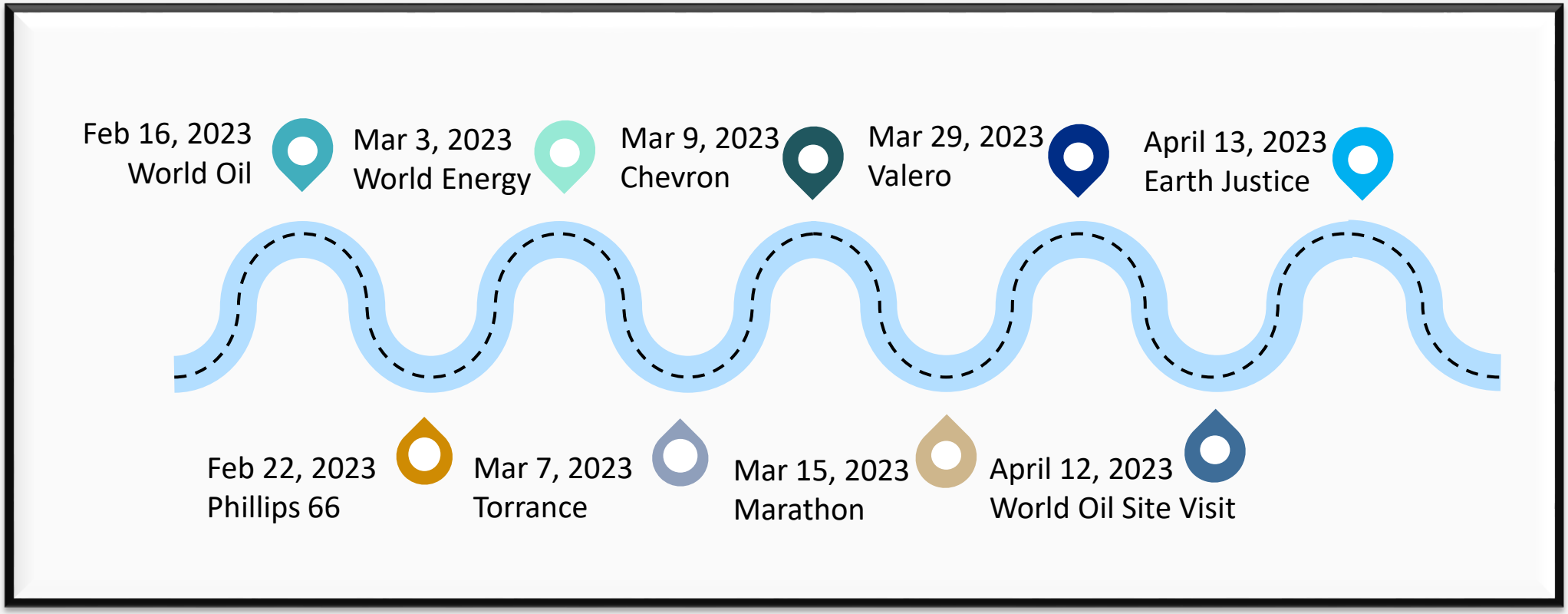
- Reviewed the rule development process
- Provided a background on Rule 1180
- Provided information on California air monitoring rules and litigation
- PAR 1180 applicability and target compound list
- Proposed the rule approach

Since last working group meeting

- Staff continued meetings and conducted site visits with existing and new potential facilities

Stakeholder Meetings

- Staff is meeting with stakeholders and conducting site visits with PAR 1180 and PR 1180.1 stakeholders including existing and new potential facilities and environmental organizations



World Oil Refining Site Visit (South Gate)

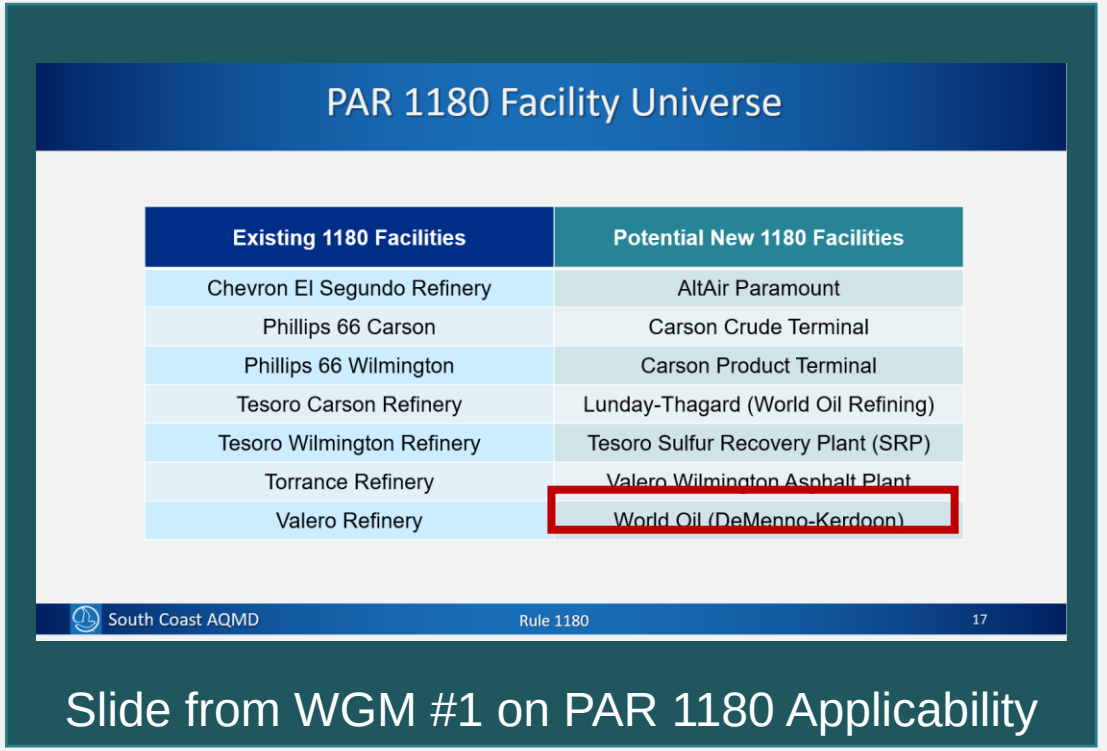
- On April 12, 2023 staff conducted a site visit of the World Oil Refining facility
  - World Oil Refining (Lunday Thagard Refinery) is a small refinery with a 3.4 acres site for refinery operations and a capacity of 8,500 bpd of crude oil[1]
- Open path monitoring for the entire perimeter would be challenging for small and compact facilities, due to:
  - Technical challenges for shorter and segmented fencelines
  - Compact and crowded arrangement of equipment may not allow a direct clear path for open path monitoring
- Facility requested staff to consider the following for small refineries:
  - Exclude certain compounds from monitoring requirement; and
  - Allow point (vs. open path) monitoring, or downwind (vs. entire perimeter) open path monitoring

[1] https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil

Proposed Amendment on Applicability

World Oil Recycling

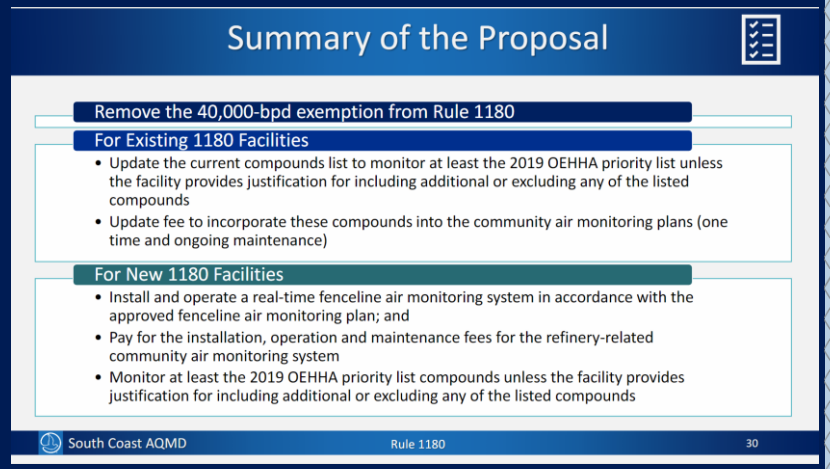
- In WGM#1 staff included World Oil Recycling (DeMenno-Kerdoon) as a new potential facility in PAR 1180
- Staff is revising the facility universe to
  - Exclude World Oil Recycling
    - Facility is not identified under Standard Industrial Classification (SIC) 2911 - Petroleum Refining*
    - Establishments primarily re-refining used lubricating oils are classified in SIC 2992
    - AB1647 Fenceline monitoring requirements do not apply to SIC 2992 establishments
  - Include Tesoro Logistics Wilmington Terminal
    - Facility is contiguous to the property of an existing refinery under the same ownership with related operations



Slide from WGM #1 on PAR 1180 Applicability

*SIC Industry: 2911 Petroleum Refining | NAICS Association

WGM#1 summary of the proposal



Rule Approach

Initial Approach

Amend Rule 1180 to include all new facilities in one rule

New Approach

PAR 1180
Applicable to Major Petroleum Refineries and Related Operations

PR 1180.1
Applicable to Facilities Primarily Refining Alternative Feedstock and Asphalt Plants

PAR 1180 and PR 1180.1 Applicability Criteria

PAR 1180

Major Petroleum Refineries

- Facilities that primarily process crude oil to produce transportation fuels
- Tesoro, Torrance, Chevron, Valero, Phillips66

Related operations that are contiguous to existing facilities

- Tesoro Sulfur Recovery Plant (SRP), Carson Crude Terminal, Carson Product Terminal, and Tesoro Logistics Wilmington Terminal

PR 1180.1

Other Refineries

- Refineries that primarily process crude oil to produce asphalt
  - Valero Wilmington Asphalt Plant
  - World Oil Refining

Refineries that process Alternative Feedstock

- Facilities that primarily process alternative feedstock
- AltAir Paramount

PAR 1180 Applicability

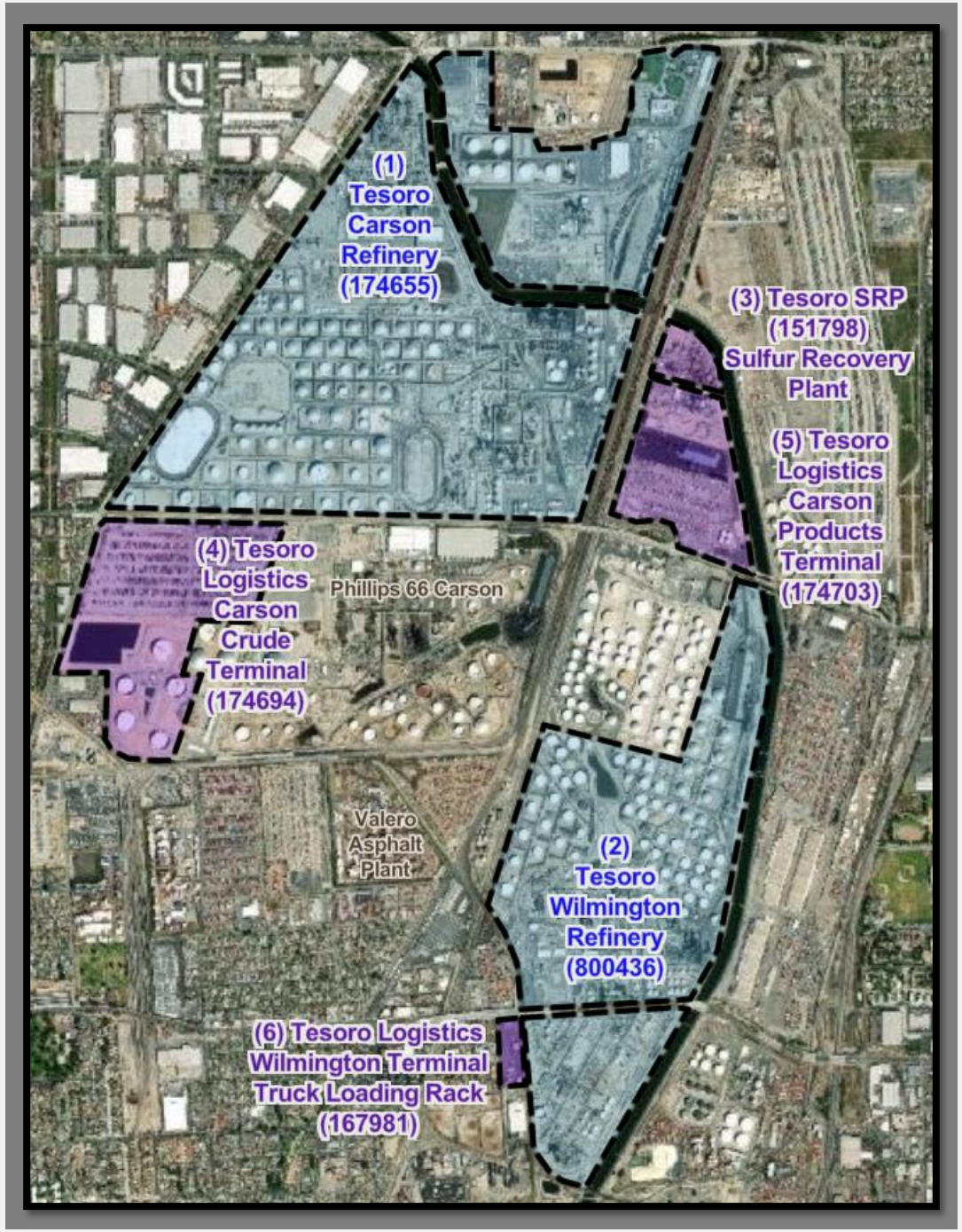
- Existing facilities
- Contiguous facilities with related operations

Existing 1180 Facilities
Chevron El Segundo Refinery
Phillips 66 Carson
Phillips 66 Wilmington
Tesoro Carson Refinery
Tesoro Wilmington Refinery
Torrance Refinery
Valero Refinery

Potential New Rule 1180 Facilities
Carson Crude Terminal
Carson Product Terminal
Tesoro Sulfur Recovery Plant (SRP) (Carson)
Tesoro Logistics Wilmington Terminal

PAR 1180 Applicability

- Four new potential facilities contiguous to the property of an existing refinery under the same ownership with related operations are:
  - Carson Crude Terminal
  - Carson Product Terminal
  - Tesoro Sulfur Recovery Plant (SRP)
  - Tesoro Logistics Wilmington Terminal
- Facilities subject to the existing rule 1180 requirements should submit an updated fenceline air monitoring plan to include the contiguous new facilities under the same ownership



PR 1180.1 Applicability

- Potential new facility:
  - Refineries processing alternative feedstock

Alternative Feedstock

Potential New Rule 1180.1 Facilities
Alt Air Paramount*
World-Oil Refining
Valero Wilmington Asphalt Plant

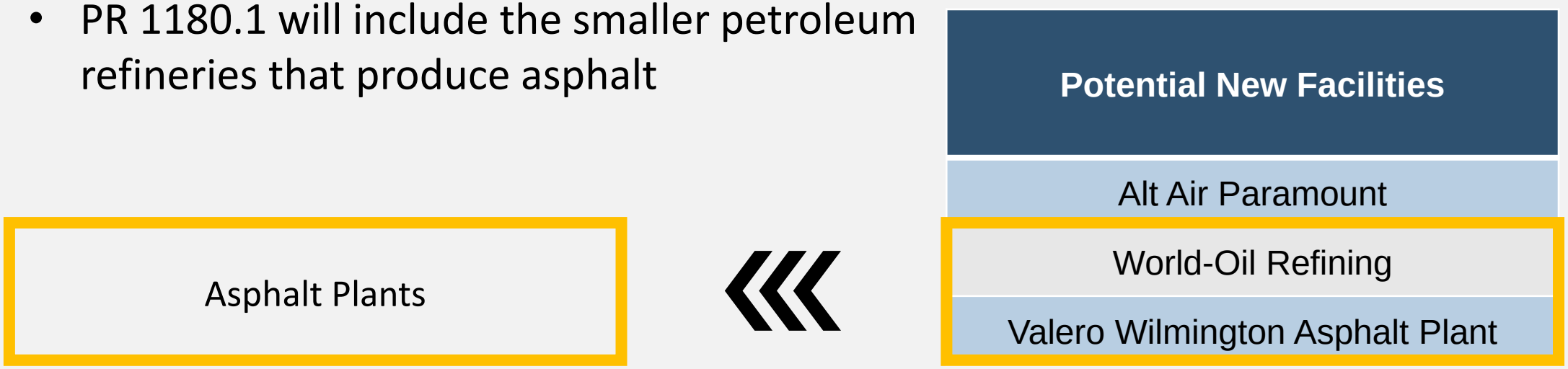
* Facility processes less than 40k bpd

Refineries Processing Alternative Feedstocks

- In 2021, the Fresno Superior Court (Case No. 20CECG03416) ordered SJV APCD to remove the exemption for non-crude oil refining facilities from its refinery rules
- In 2021, BAAQMD amended Regulation 12 Rule 15 to include alternative feedstocks
  - Ensure monitoring for facilities that modify its facility operations to process alternative feedstocks
- AltAir Paramount is engaging in processing alternative feedstock with a current throughput under 40,000 bpd
- Staff anticipating more refineries could modify the facility operation in the future to process alternative feedstocks at a partial or full capacity

PR 1180.1 Applicability

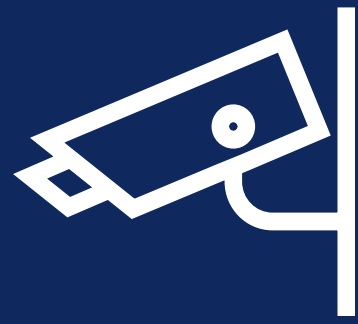
- Potential new facilities:
  - Rule 1180 exempted small petroleum refineries (≤ 40,000 barrels per day of crude oil)
  - PR 1180.1 will include the smaller petroleum refineries that produce asphalt



Petroleum Refineries that Produce Asphalt

- The two smaller petroleum refineries produce asphalt from crude oil in the South Coast AQMD
  - Classified under SIC 2911
  - Currently exempted from Rule 1180 as their maximum process capacities are less than 40,000 bpd
- In 2021, the Fresno Superior Court (Case No. 20CECG03416; 2021) ordered SJVAPCD to remove the exemption for under 40,000 bpd petroleum refineries
- South Coast AQMD agreed to release a proposed rule (or proposed amended rule) that removes the exemption for petroleum refineries with a capacity of less than 40,000 bpd in response to litigation (Case No. 22STCP04398, LA Superior Court)

Proposed Amendment on Compound List



As discussed in WGM#1, seven additional target compounds were added to the Final OEHHA Analysis of Refinery Chemical Emissions and Health Effects*

*https://oehha.ca.gov/air/analysis-refinery-chemical-emissions-and-health-effects

Slide from WGM #1

Rule 1180 Compound List

- Table provides a comparison for the chemicals included in Rule 1180 versus the OEHHA priority list
- The highlighted compounds in red are not currently required to be monitored by Rule 1180

	2019 OEHHA Target Compound Included in Rule 1180?
Acetaldehyde	Y
Acrolein	Y
Ammonia	Y
Benzene	Y
Black Carbon	Y
1,3-butadiene	Y
Cadmium	N
Carbonyl Sulfide	Y
Diethanolamine	N
Ethylbenzene	Y
Formaldehyde	Y
Hydrogen Cyanide	Y
Hydrogen Fluoride	Y
Hydrogen Sulfide	Y
Manganese	N
Naphthalene	N
Nickel	N
Nitrogen Oxide	Y
Polycyclic aromatic hydrocarbons (PAH)	N
Particulate Matter	N (Only BC is currently measured)
Styrene	Y
Sulfur Dioxide	Y
Sulfuric Acid	N
Toluene	Y
Total VOCs (Non-Methane Hydrocarbons)	Y
Xylenes	Y

Current Monitoring Technologies

- Current Rule 1180 fenceline monitoring utilizes open-path instruments and point monitors
- Open-path instruments transmit light or infrared energy across a long open path
  - Absorption of light relates to the average concentration of gases of interest along the path according to the Beer-Lambert absorption law
  - Detectors include FTIR and UV
- Point monitors are used to measure black carbon and hydrogen sulfide
  - Black Carbon monitor: Aethalometer for particulate matter deposited on a filter
  - Hydrogen Sulfide detector: Reaction based

Existing Rule 1180 Compounds	Monitoring Technology
Acetaldehyde	Open-path FTIR
Acrolein	Open-path FTIR
Ammonia	Open-path FTIR
Benzene	Open-path UV, Open-Path FTIR
Black Carbon	Black Carbon Monitor
1,3-butadiene	Open-path FTIR
Carbonyl Sulfide	Open-path FTIR
Ethylbenzene	Open-path UV, Open-Path FTIR
Formaldehyde	Open-path FTIR
Hydrogen Cyanide	Open-path FTIR
Hydrogen Fluoride	Open-path FTIR
Hydrogen Sulfide	Hydrogen Sulfide Detector
Nitrogen Oxide	Open-path FTIR
Styrene	Open-path FTIR
Sulfur Dioxide	Open-path UV, Open-Path FTIR
Toluene	Open-path UV, Open-Path FTIR
Total VOCs (Non-Methane Hydrocarbons)	Open-path FTIR
Xylenes	Open-path UV, Open-Path FTIR

Potential Monitoring Technology for New Compounds

- The following new compounds are not included in Rule 1180, but are identified in the 2019 OEHHA report as the top candidates for air monitoring
- Open-Path UV and FTIR instruments are capable of monitoring Naphthalene
- Point monitors are required for metals and PM
- No feasible monitoring technologies are identified for some of the new compounds

	Potential Technologies
Cadmium	X-Ray Fluorescence Metal Monitor
Manganese	X-Ray Fluorescence Metal Monitor
Nickel	X-Ray Fluorescence Metal Monitor
Naphthalene	Open-Path UV or FTIR
Diethanolamine	Compound do not remain in the gas phase long enough to be detected at fenceline
Polycyclic Aromatic Hydrocarbons (PAH)	No feasible real-time monitoring technology identified (Rapid on-site quantitative assessment (near real-time) may be possible)
Particulate Matter	PM Monitor
Sulfuric Acid	Compound do not remain in the gas phase long enough to be detected at fenceline

X-Ray Fluorescence (XRF) Technology for Metal Monitoring

- Facility expressed concern on radiation exposure to workers from XRF technology proposed for metal detection and communities' reaction
- XRF monitors for fenceline monitoring are placed in a shelter on the refinery property for the safety of the community and workers
- Safety procedures are set by federal and state regulations, manufacturer recommendations, and workplace policies to protect workers
- XRF monitors are used in a wide variety of industries to measure the elemental composition of materials including for metals
- Safely utilized in many South Coast AQMD community air monitoring stations

Proposed Amendment to Compound List

- Staff proposes to:
  - Include the new compounds suggested by the OEHHA 2019 final report;
  - Set criteria for exclusion of any listed compounds in the R1180/1180.1 Fenceline Air Monitoring Guidelines; and
  - Explain what is feasible to monitor using current technologies in staff report
- Staff is assessing:
  - Cost of each new monitoring systems
  - Overall cost (i.e. installation and O&M) for fenceline and community air monitoring stations
  - Notification thresholds of the new compounds
- During Fenceline Air Monitoring Plan evaluation, staff will assess:
  - Fenceline monitoring sites required for each potential new facility
  - Additional fenceline monitoring sites required for existing refineries that have to monitor the fenceline of new facilities with related operations on contiguous property

Table 1– Air Pollutants to be Addressed by Fenceline Air Monitoring Plans

Air Pollutants
Criteria Air Pollutants
Sulfur Dioxide
Nitrogen Oxides
Particulate Matter
Volatile Organic Compounds
Total VOCs (Non-Methane Hydrocarbons)
Formaldehyde
Acetaldehyde
Acrolein
1,3 Butadiene
Naphthalene
Diethanolamine
Polycyclic aromatic hydrocarbons (PAH)
Styrene
BTEX Compounds (Benzene, Toluene, Ethylbenzene, Xylenes)
Metals
Cadmium
Manganese
Nickel
Other Compounds
Hydrogen Sulfide
Carbonyl Sulfide
Ammonia
Black Carbon
Hydrogen Cyanide
Hydrogen Fluoride+
Sulfuric Acid

+ If the facility uses hydrogen fluoride.

Considerations for Criteria of Exclusion

- A facility is required to demonstrate one or more of the following criteria to exclude a compound from the required monitoring:
  - The pollutant is not emitted and never has been emitted through the facility's activities and processes;
  - Real-time air monitors capable of reliably measuring the pollutant are not available;
  - The expected concentration levels of the pollutant at the fence-line are below the detection limits of currently available real-time monitoring equipment; or
  - Other technical justifications
- The facility must submit a revised fenceline air monitoring plan to reflect any requests to exclude a compound

Criteria of Exclusion – Technical Feasibility

- Compounds may be considered for exclusion if no feasible real-time monitoring technology has been identified
- Staff acknowledges, and will state in the staff report ,that there are no real-time detection technologies for PAHs, sulfuric acid, and diethanolamine
- Facility can cite staff report as justification for not including compounds
- Staff will conduct periodic research studies on the progress of the monitoring technologies
  - Considering requirement for staff to conduct a review of technology, rule language, and guidelines and report findings to the Board every 5 years
- If staff determines real-time air monitoring is feasible for any previously excluded compound, the facility would:
  - Revise the fenceline monitoring plan within six months; and
  - Start to monitor the newly included compound within one year after the plan is approved

Criteria of Exclusion – Compound Not Part of Process

- Compounds that are not used and have never been used at a facility can be excluded based on facility's activities and processes
  - *For example, an asphalt plant that does not use, and has never used, Hydrofluoric Acid could request to exclude it from their fenceline air monitoring plan*
- For a facility with related operations to the petroleum refinery, new monitoring may not be required for compound(s) not generated at that site
  - *For example, a tank terminal could request to exclude NOx monitoring if it only stores VOC containing materials and has no combustion sources or nitric acid process*
- Facility would have to justify excluding compounds when they submit their facility air monitoring plan
  - Plans are subject to Executive Officer approval

Summary for Compounds Criteria of Exclusion

March 2019 OEHHA Compounds	Criteria for Exclusion
Criteria Air Pollutants	
Sulfur Dioxide	
Nitrogen Oxides	
Particulate Matter	
Volatile Organic Compounds	
Total VOCs (Non Methane Hydrocarbons)	
Formaldehyde	
Acetaldehyde	
Acrolein	
1,3 Butadiene	
Naphthalene	
Diethanolamine	No Available Real-time Monitoring Technology
Polycyclic Aromatic Hydrocarbons (PAH)	No Available Real-time Monitoring Technology
Styrene	
BTEX Compounds (Benzene, Toluene, Ethylbenzene, Xylene)	
Metals	
Cadmium	
Manganese	
Nickel	
Other Compounds	
Hydrogen Sulfide	
Carbonyl Sulfide	
Ammonia	
Black Carbon	
Hydrogen Cyanide	
Hydrogen Fluoride	
Sulfuric Acid	No Available Real-time Monitoring Technology

Community Air Monitoring

Background on Air Monitoring Technologies

- Air Monitoring Equipment
  - Will be placed in climate-controlled structures
  - Meet short- and long-term monitoring requirements
    - Long-term monitoring is essential to assess trends and potential air quality impacts from refinery emissions, and the equipment selected for this purpose should be able to detect typical urban variations of the target pollutants
    - Short-term monitoring is necessary to evaluate the immediate impact of fugitive emissions (e.g., leaks) and other releases in the surrounding communities and will require monitoring equipment with high time-resolution and reporting data in real-time or near real-time
- Air Monitoring Site Selection
  - Stations will be selected to be representative of typical air quality conditions in communities around the refineries
  - And to characterize air quality and potential impacts that may result from refinery-related operations

A typical Fixed-Site Community Air Monitoring Station

Site Selection Considerations for a Community Air Monitoring System

Community Air Monitoring

- South Coast AQMD to develop, install and operate a network of air monitoring stations in in accordance with a Community Air Monitoring Plan (CAMP)
- Currently there are 10 community monitoring stations operating for 7 refineries as shown in the table

Existing Facility	# of stations
Tesoro Carson	3
Tesoro Wilmington	
Torrance Refining Company	2
Chevron – El Segundo	2
Phillips 66 – Carson	2
Phillips 66 – Wilmington	
Valero Wilmington	1

Proposed Community Air Monitoring for New Potential Facilities

- Staff is proposing to have at least one community monitoring station for each new potential facility subject to the rule
  - Number of community monitoring stations could be increased in future if a facility exceeds the REL threshold continuously
- An owner or operator with an existing Rule 1180 fenceline monitoring plan that modifies plan to include related facilities may not be subject to new community monitoring requirements/fees

New Potential Facility	# of stations
World Oil Refining	1
World Energy Paramount	1
Tesoro SRP	Update existing plan
Carson Crude Terminal	Update existing plan
Carson Product Terminal	Update existing plan
Valero Wilmington Asphalt Plant	1

Community Monitoring Fees Updates

- Community monitoring fees will be updated for both:
  - Initial installation costs
  - Annual operation and maintenance

Initial Capital Cost (Rules 1180 and 1180.1 Table 2)	Annual Operation and Maintenance Fee (Rule 301)
• Rule 1180: additional required monitors • Rule 1180.1: new community monitoring stations • Costs include installation cost (e.g., labor/testing/parts)	• Based on actual maintenance cost and staff hours • Will evaluate and update the fee at future Rule 301 amendments

Proposed Community Monitoring Capital Cost Update

- Staff proposes to include a new fee table for:
  - Rule 1180.1 Facilities: new community monitoring stations
  - Existing Rule 1180 facilities: Additional monitor(s) in existing station
- Numbers are based on a preliminary assessment and are subject to change

Table 2 – Refinery-Related Community Air Monitoring System Fees

Facility Name* and Location	Effective Dates and Fee Requirements	
	No later than July 1, 2024, petroleum refineries shall make the following initial minimum payment required by paragraph (i)(2)	No later than January 30, 2025, petroleum refineries shall make the following final payment required by paragraph (i)(3)
AltAir Paramount	$253,320	$591,080
Lunday-Thagard (World Oil Refining)	$253,320	$591,080
Valero Wilmington Asphalt Plant	$253,320	$591,080

*Based on the current facility names. Any subsequent owner(s) or operator(s) of the above listed facilities shall be subject to this rule unless exempted pursuant to its terms.

Table 2. 1180.1

Table 2 – Refinery-Related Community Air Monitoring System Fees

Facility Name* and Location	Effective Dates and Fee Requirements		
	No later than July 1, 2018, petroleum refineries shall make the following initial minimum payment required by paragraph (ji)(2) – Phase One Implementation	No later than January 30, 2019, petroleum refineries shall make the following final payment required by paragraph (ji)(3) – Phase One Implementation	No later than July 1, 2024, petroleum refineries shall make the following payment required by paragraph (i)(4) – Phase Two Implementation
Andeavor Corporation (Carson)	$429,078	$1,001,181	$258,540
Andeavor Corporation (Wilmington)	$214,539	$500,591	$129,270
Chevron U.S.A, Inc. (El Segundo)	$429,078	$1,001,181	$258,540
Delek U.S. Holdings, Inc. (Paramount)	$107,269	$250,295	$64,635
Phillips 66 Company (Carson)	$214,539	$500,591	$129,270
Phillips 66 Company (Wilmington)	$214,539	$500,591	$129,270
PBF Energy, Torrance Refining Company (Torrance)	$429,078	$1,001,181	$258,540
Valero Energy (Wilmington)	$214,539	$500,591	$129,270

*Based on the current facility names. Any subsequent owner(s) or operator(s) of the above listed facilities shall be subject to this rule unless exempted pursuant to its terms.

Table 2. 1180

Summary of PAR 1180 and PR 1180.1 Requirements

PAR 1180

- Update the current compounds list to monitor at least the 2019 OEHHA priority list unless the facility provides justification for excluding any of the listed compounds
- Update fee to incorporate these compounds into the community air monitoring plans (one time and ongoing maintenance)
- Require applicable existing facilities to update the fenceline air monitoring plan to include new contiguous facilities and new compounds

PR 1180.1

- Require monitoring of compounds on the 2019 OEHHA priority list unless the facility provides justification for excluding any of the listed compounds
- Include applicable fees for the installation, operation and maintenance refinery-related community air monitoring system
- Require applicable facilities to install and operate a real-time fenceline air monitoring system in accordance with its approved fenceline air monitoring plan

Additional Considerations

Root Cause Analysis

- In Working Group Meeting #1 a rule requirement was considered for facilities to investigate the cause whenever a compound is measured above the notification threshold and report the cause and corrective action to Executive Officer
- Staff proposes for both PAR 1180 and PR 1180.1 to:
  - Define “Root Cause Analysis” as a process conducted by an applicable facility to investigate any compound detected above its notification threshold
  - Require submitting a Root Cause Analysis report within 14 days after a compound is detected above its notification threshold, including:
    - Cause, duration, and source(s);
    - Any mitigation and corrective actions taken or to be taken to prevent a similar recurrence;
    - Whether the corrective actions identified in a Root Cause Analysis are implemented promptly; and
    - Any monitoring data that the Executive Officer requests

Fenceline Monitoring Quarterly Report

- Fenceline Air Monitoring Plan Guidelines require each facility design a data display website that includes quarterly data summary reports, including relationship to health thresholds, data completeness, instrument issues, and quality control efforts
- Rule 1180 requires facilities maintain records of all information required under this rule for at least five years and make them available upon request
- Staff received concerns that the monitored data are not in an easy accessible format
- Staff is considering a requirement to improve the accessibility of all data measured, calculated, and reported

Fenceline Monitoring Guidelines Update

- Guidelines will be amended to address the proposed rule requirements
  - Applicable to both PAR 1180 and PR 1180.1;
  - Include the new compounds;
  - Address the selection of monitoring systems for the new compounds;
  - Specify the criteria of excluding any compound from monitoring; and
  - Specify the notification thresholds for new compounds

Senate Bill 674

The Refinery Air Pollution Transparency and Reduction Act

Senate Bill 674

On February 16, 2023, Senator Lena Gonzalez (Long Beach), introduced Senate Bill 674 (SB 674) – The Refinery Air Pollution Transparency and Reduction Act

- Set for Senate Hearing on March 29, 2023

SB 674 would extend the requirements of Assembly Bill (AB) 1647 (Maratsuchi, Chapter 589, Statutes of 2017) – Petroleum refineries: air monitoring systems by:

- Expanding the definition of refineries to include non-crude oil feedstock refineries and auxiliary facilities; and
- Requiring refineries to improve public notification processes, reporting, data accessibility, and to conduct third-party audits and root cause analyses of any threshold exceedances

Summary of the Proposed Requirements of Senate Bill 674

Applicability	Target Compound List	REL Exceedance Notification	Root Cause Analysis	Third party Audits
• SB 674 requires to include non-crude oil refineries and auxiliary facilities	• SB 674 requires to include compounds identified by March 2019 OEHHA report	• The bill requires to notify public for any REL or EPA concentration level exceedance	• Bill requires to include root cause analysis for any exceedance of a historical one-hour average concentration (report in 5 days)	• Bill requires refineries to perform third party audits to ensure data accuracy

STAFF COMMENTS BELOW

Considering to include non-crude oil refineries, however seeking more clarification on the intended scope of auxiliary facilities	Considering the same requirement	Considering to include a root cause analysis; suggest a different trigger (e.g., notification threshold) and timeline (e.g., report in 14 days)	Rule 1180 currently requires independent audit; may need to align the audit timeline

Proposed Rule Amendments

Proposed Rule Amendments

Existing Rule Language	Proposed Amended Rule Language
(a) Purpose	(a) Purpose
(b) Applicability	(b) Applicability
(c) Definitions	(c) Definitions
(d) Plan Requirements	(d) Plan Requirements
(e) Fenceline Air Monitoring System Requirements	(e) Fenceline Air Monitoring System Requirements
(f) Plan Review Process	(f) Plan Review Process
(g) Notifications	(g) Notifications
(h) Recordkeeping	(h) Recordkeeping and Reporting
(i) Community Air Monitoring Fees	(i) Community Air Monitoring Fees
(j) Exemptions	(j) Exemptions

Rule 1180
(b) Applicability

- Proposed amended applicability would include:
  - Refineries and facilities with related operations to refineries located on contiguous properties
  - Including but not limited to Tank Terminals and Sulfur Recovery Plants

(b) Applicability

This rule applies to petroleum refineries and Facilities with Related Operations to Petroleum Refineries located on contiguous properties, including, but not limited to, Tank Terminals and Sulfur Recovery Plants. This rule does not apply to Asphalt Plants subject to Rule 1180.1.

Rule 1180.1
(b) Applicability

- The proposed applicability would include:
  - Refineries that primarily process alternative feedstock and asphalt plants
  - Except petroleum refineries subject to Rule 1180

(b) Applicability

This rule applies to refineries that process crude oil, alternative feedstock, or both crude oil and alternative feedstock. This rule does not apply to petroleum refineries subject to Rule 1180.

Rule 1180

(c) Definitions

(1) ASPHALT PLANT is a facility defined in the Standard Industrial Classification Manual as Industry No. 2911 that is engaged in producing asphaltic materials.

(3) FACILITIES WITH RELATED OPERATIONS TO PETROLEUM REFINERIES include Facilities with the Same Ownership that have operations related to the refinery processes, including Tank Terminals and Sulfur Recovery Plants.

(4) FACILITIES WITH THE SAME OWNERSHIP means Facilities and their subsidiaries, Facilities that share the same board of directors, or Facilities that share the same parent corporation.

(5) FACILITY means, for the purpose of this rule, any Petroleum Refinery or Facility with Related Operations to Petroleum Refineries that is applicable to this rule.

Rule 1180

(c) Definitions

(7) NOTIFICATION THRESHOLD is a level that triggers a notification requirement for compound(s) listed in Table 1 pursuant to Refinery Fenceline Air Monitoring Plan Guidelines or the approved air monitoring plan.

(11) ROOT CAUSE ANALYSIS is a process conducted by a facility subject to this rule to investigate the detection of compound(s) listed in Table 1 above an applicable Notification Threshold.

(12) SULFUR RECOVERY PLANT means Units within a Petroleum Refinery, or a separate Facility, that recovers elemental sulfur or sulfur compounds from sour or acid gases and/or sour water generated by Petroleum Refineries.

(13) TANK TERMINAL is an industrial facility for the storage of oil, petroleum and petrochemical products, and from which these products are transported to end users or other storage facilities

Rule 1180
(d) Plan Requirements

(d) Plan Requirements

(1) No later than August 1, 2018, the owner or operator of a petroleum refinery shall submit to the Executive Officer a written fenceline air monitoring plan for establishing and operating a real-time fenceline air monitoring system.

(2) No later than six months after [*Date of Rule Adoption*], the owner or operator of a Facility with an existing fenceline air monitoring plan shall submit an updated fenceline air monitoring plan to include:

(A) Any Facilities with Related Operations to Petroleum Refineries located on contiguous property; or/and

(B) Any compound in Table 1 that are not addressed in previous plan.

Rule 1180

(h) Recordkeeping and Reporting

(2) Root Cause Analysis

When a compound is measured above the Notification Threshold, the owner or operator of a Facility shall:

(A) Initiate a Root Cause Analysis within 24 hours;

(B) Submit a Root Cause Analysis report within 14 days,* at a minimum, including:

(i) The cause and duration;

(ii) Determination of the source(s) of the exceedance by a visual inspection and any of the optical gas imaging, leak inspection using EPA Method 21, and other test or monitoring method approved by the Executive Officer;

(iii) Any mitigation and corrective actions taken or to be taken to prevent a similar recurrence;

(iv) An explanation of the reason(s) why the amount of time is required for the corrective actions if it is more than 14 days; and

(v) Any monitoring data that the Executive Officer requests.

* Senate Bill 674 requires a Root Cause Analysis to be submitted within 5 days of an incident

Rule 1180 and 1180.1
Table 1 – Compound List

Table 1– Air Pollutants to be Addressed by Fenceline Air Monitoring Plans

Air Pollutants
Criteria Air Pollutants
Sulfur Dioxide
Nitrogen Oxides
Particulate Matter
Volatile Organic Compounds
Total VOCs (Non-Methane Hydrocarbons)
Formaldehyde
Acetaldehyde
Acrolein
1,3 Butadiene
Naphthalene
Diethanolamine
Polycyclic aromatic hydrocarbons (PAHs)
Styrene
BTEX Compounds (Benzene, Toluene, Ethylbenzene, Xylenes)
Metals
Cadmium
Manganese
Nickel
Other Compounds
Hydrogen Sulfide
Carbonyl Sulfide
Ammonia
Black Carbon
Hydrogen Cyanide
Hydrogen Fluoride+
Sulfuric Acid

+ If the facility uses hydrogen fluoride.

Next Steps

Staff will release an initial draft of the rule language for both PAR 1180 and PR 1180.1 to receive feedback

- Initial draft will be for discussion purposes only

Staff scheduled and will continue to conduct site visits

Meeting with stakeholders will be continued

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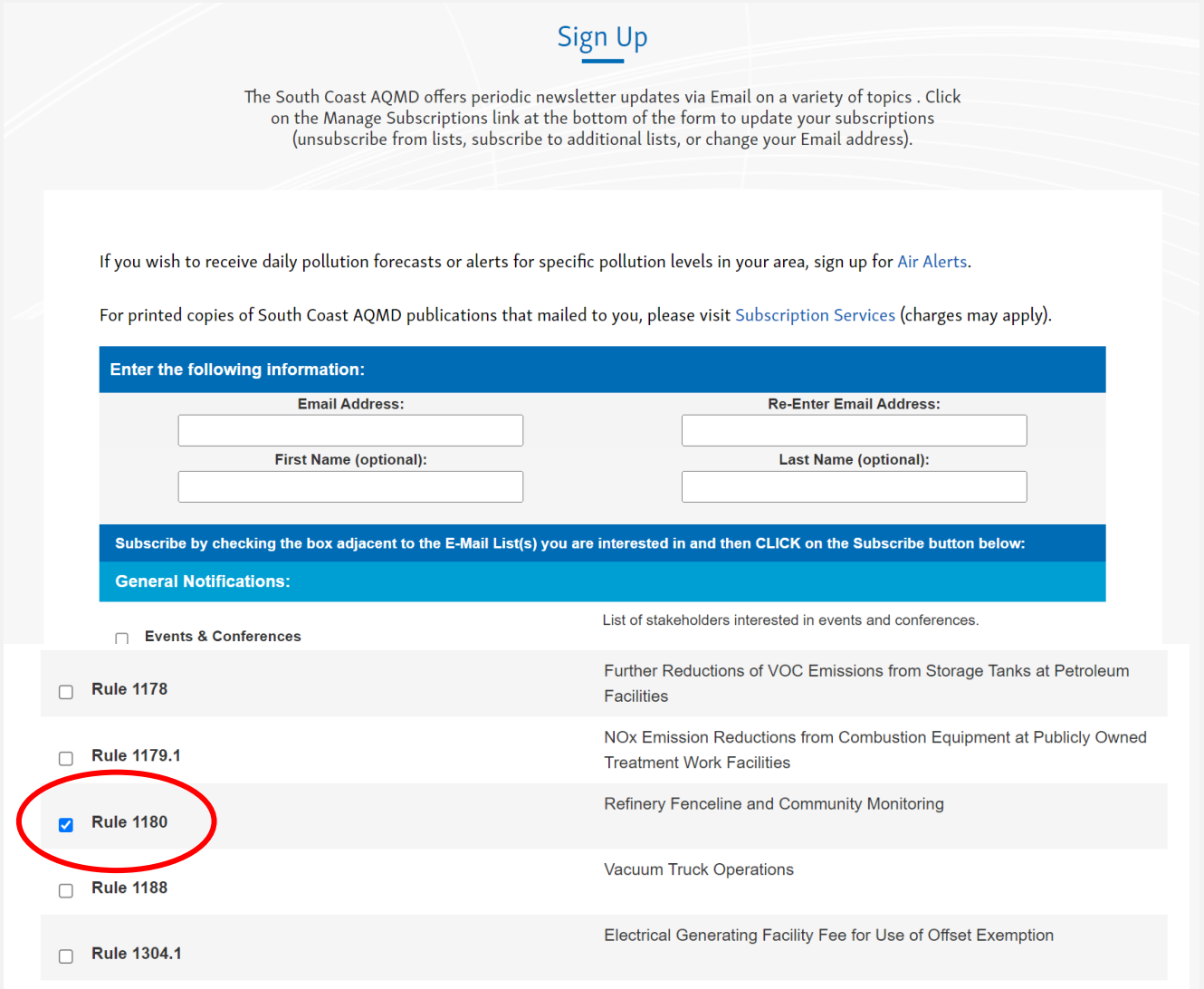

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☑ Rule 1180	Refinery Fenceline and Community Monitoring
☐ Rule 1188	Vacuum Truck Operations
☐ Rule 1304.1	Electrical Generating Facility Fee for Use of Offset Exemption

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