



# South Coast Air Quality Management District



21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

## REFINERY COMMITTEE MEETING

### COMMITTEE MEMBERS

Mayor Pro Tem Larry McCallon, Chair  
Mayor Judith Mitchell, Vice Chair  
Supervisor Lisa Bartlett  
Council Member Ben Benoit  
Supervisor Janice Hahn

Saturday, June 22, 2019 - 10:00 a.m.

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

### AGENDA

Members of the public may address this body concerning any agenda item before or during consideration of that item (Gov't. Code Section 54854.3(a)). If you wish to address the Refinery Committee, you will need to enter your name on available iPads to be placed on the list of speakers. South Coast AQMD staff will be available to assist with this procedure. All agendas for regular meetings are posted at South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California at least 72 hours in advance of the regular meeting. Speakers may be limited to three (3) minutes or less each.

Items are expected to be completed in the order listed below. However, items may be taken in any order.

- |    |  |   |
|----|--|---|
| 1. | <b>Welcome / Opening Remarks</b>               | <i>Mayor Pro Tem Larry McCallon<br/>Committee Chair</i>                             |
| a. | <b>Introduction</b>                            | <i>Wayne Nastri<br/>Executive Officer</i>   |
| b. | <b>Staff Presentation - Status Update</b>      | <i>Susan Nakamura<br/>Assistant Deputy Executive Officer<br/>Planning and Rules</i> |
| c. | <b>Torrance Refining Company<br/>(TORC)</b>    | <i>15 Minutes</i>   |
| d. | <b>Valero Wilmington Refinery<br/>(Valero)</b> | <i>15 Minutes</i>   |

- e. **Union Organizations** 5 Minutes
  - f. **Community Organizations** 20 Minutes  
 (Ban Toxic MHF, Communities for a Better Environment, Sierra Club, Torrance Refinery Action Alliance)
  - g. **Public Comments**  
*Speakers may be limited to three (3) minutes or less.*
  - h. **Refinery Committee Discussion** *Committee Members*
  - i. **Closing Remarks** *Mayor Pro Tem Larry McCallon  
Committee Chair*
2. **Other Public Comments**  
*At the end of the meeting agenda, an opportunity is provided for the public to speak on any subject within the Committee's authority that is not on the agenda. Speakers may be limited to three (3) minutes or less.*

**Document Availability**

*All documents (i) constituting non-exempt public records, (ii) relating to an item on the agenda, and (iii) having been distributed to at least a majority of the Committee after the agenda is posted, are available prior to the meeting for public review at the South Coast AQMD Public Information Center, 21865 Copley Drive, Diamond Bar, CA 91765, and will also be available at the meeting site on the day of the meeting.*

**Americans with Disabilities Act**

*The agenda and documents in the agenda packet will be made available, upon request, in appropriate alternative formats to assist persons with a disability [Govt. Code Section 54954.2(a)]. Disability-related accommodations will also be made available to allow participation in the meeting. Any accommodations must be requested as soon as practicable. Requests will be accommodated to the extent feasible. Please contact Jacob Allen at 909-396-2282 from 7 a.m. to 5:30 p.m. Tuesday through Friday, or send the request to [jallen2@aqmd.gov](mailto:jallen2@aqmd.gov).*



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South Coast  
AQMD

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## REUNIÓN DEL COMITÉ DE REFINERÍA

### MIEMBROS DEL COMITÉ

Mayor Pro Tem Larry McCallon, (Presidente del Comité)  
Mayor Judith Mitchell, Vice Chair (Vice-Presidente del Comité)  
Supervisor Lisa Bartlett  
Council Member Ben Benoit  
Supervisor Janice Hahn

Sábado, 22 de junio del 2019 - 10:00 A.M.  
South Coast Air Quality Management District  
Auditorium  
21865 Copley Drive  
Diamond Bar, CA 91765

### AGENDA

Los miembros del público pueden dirigirse a este órgano en relación con cualquier tema de la agenda antes o durante la consideración de ese tema (Gov't. Code Section 54854.3 (a)). Si desea dirigirse al Comité de Refinería, deberá ingresar su nombre en los iPads disponibles para incluirlos en la lista de persona que desean hacer comentarios. El personal de South Coast AQMD estará disponible para ayudar con este procedimiento. Todas las agendas para las reuniones regulares se publican en las oficinas centrales de South Coast AQMD, 21865 Copley Drive, Diamond Bar, California, al menos 72 horas antes de la reunión regular. Los comentaristas pueden ser limitados a tres (3) minutos o menos cada uno.

Se espera que los artículos de la agenda se completen en el orden indicado. Sin embargo, los artículos pueden ser tomados en cualquier orden.

1. **Bienvenida/Apertura**  
*Mayor Pro Tem Larry McCallon  
Committee Chair (Presidente del Comité)*
- a. **Introducción**  
*Wayne Nastri  
Executive Officer (Director  
Ejecutivo)*
- b. **Presentación del personal -  
Actualización del tema**  
*Susan Nakamura  
Assistant Deputy Executive Officer  
Planning and Rules (Ejecutiva de  
Planificación y Reglas)*
- c. **Refinería Torrance (TORC)** *15 Minutes*
- d. **Refinería Valero** *15 Minutes*

- e. Organizaciones laborales "Uniones" 5 Minutes
  
- f. Organizaciones Comunitarias 20 Minutes  
(Ban Toxic MHF, Communities for a Better Environment, Sierra Club, Torrance Refinery Action Alliance)
  
- g. Comentario Publico  
Los comentaristas pueden ser limitados a tres (3) minutos o menos cada uno
- h. Discusión del Comité de Refinería Committee Members
  
- i. Observaciones finales Mayor Pro Tem Larry McCallon  
Committee Chair (Presidente del Comité)

2. **Otros comentarios públicos**

*Al final de la agenda de la reunión, se brinda una oportunidad para que el público hable sobre cualquier tema dentro de la autoridad del Comité que no esté en la agenda. Los comentaristas pueden ser limitados a tres (3) minutos o menos.*

**Disponibilidad de documentos**

*Todos los documentos (i) que constituyen registros públicos no exentos, (ii) relacionados con un punto de la agenda y (iii) se han distribuido al menos la mayoría del Comité después de la publicación agenda, están disponibles antes de la reunión para revisión pública en el Centro de Información Pública de South Coast AQMD, 21865 Copley Drive, Diamond Bar, CA 91765, y también estará disponible en el sitio de la reunión el día de la reunión.*

**Americans with Disabilities Act (Acta acerca de discapacidades)**

*La agenda y los documentos en el paquete de la agenda estarán disponibles, previa solicitud, en formatos alternativos adecuados para ayudar a las personas con discapacidad [Código Gobierno Sección 54954.2 (a)]. Las adaptaciones relacionadas con la discapacidad también estarán disponibles para permitir la participación en la reunión. Cualquier alojamiento debe ser solicitado tan pronto como sea posible. Las solicitudes serán atendidas en la medida de lo posible. Comuníquese con Jacob Allen al 909 396-2282 de 7 A.M. a 5:30 P.M. de martes a viernes, o envíe la solicitud a [jallen2@aqmd.gov](mailto:jallen2@aqmd.gov).*

# Status Update on PR 1410 – Hydrogen Fluoride Storage and Use at Petroleum Refineries



## Refinery Committee Meeting

June 22, 2019  
Diamond Bar, California

webcast at: <http://www.aqmd.gov/home/news-events/webcast>

## Public Process



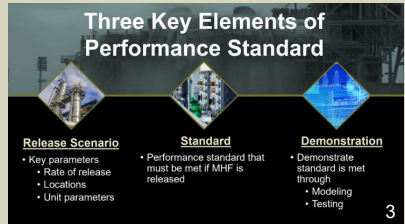
### Since April 2017

- 6 Refinery Committee Meetings
- 10 Working Group Meetings

# February Board Meeting

- Staff presentation addressed
  - Hazards of hydrogen fluoride (HF) and modified hydrogen fluoride (MHF) and key issues
- Board direction
  - Pursue both an MOU approach and proceed with rule development
  - Work with both the community and industry over the next 90 days to reach resolution
  - Present to the Refinery Committee for review with recommendations to the full Board

Uniquely hazardous health effects that result in deep tissue and bone damage...



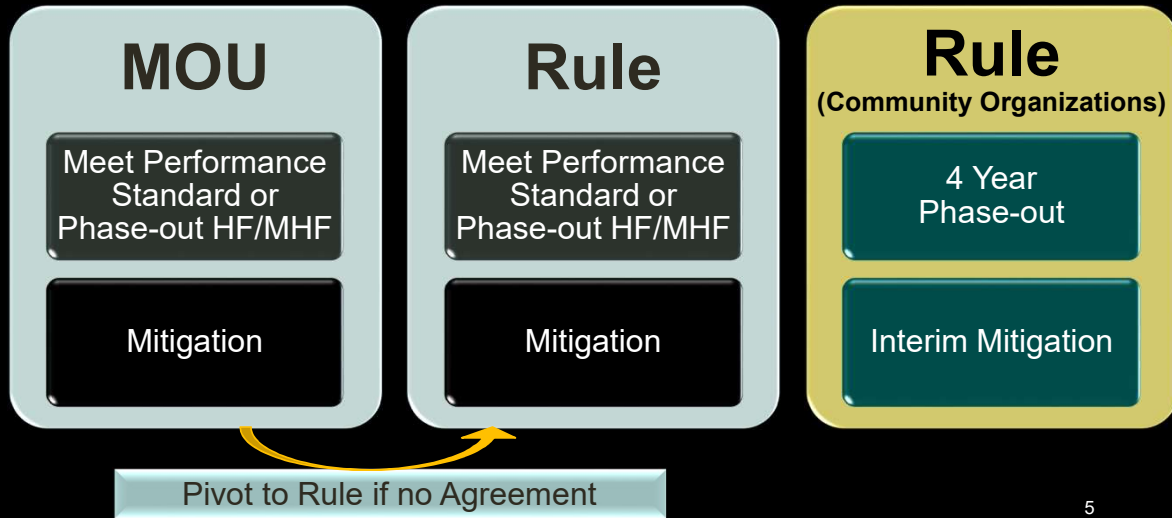
# Meetings with Stakeholders Following February Board Meeting

Updated

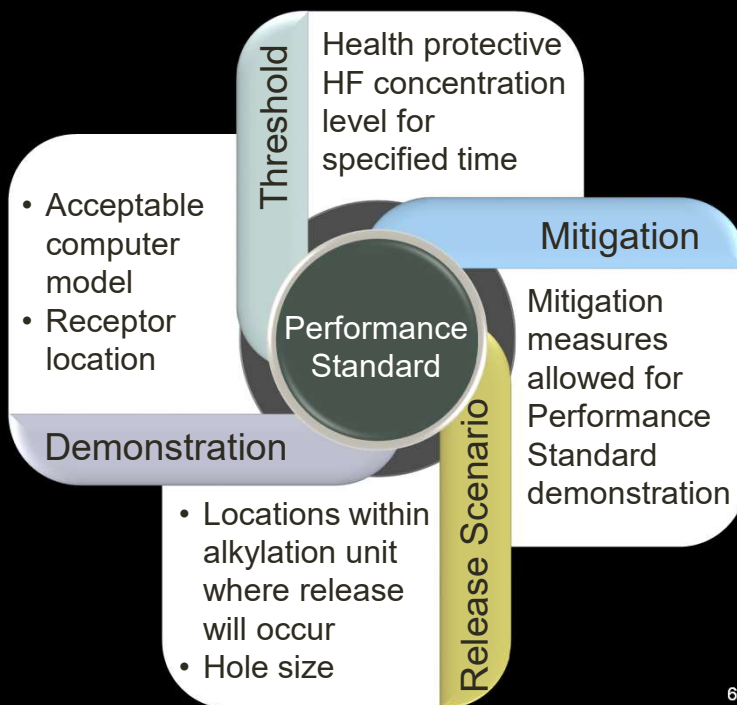
Torrance Refining Company (TORC)	Valero Wilmington Refinery (Valero)	Community Organizations <sup>1</sup>	Union Representatives <sup>2</sup>
February 13, 2019	February 20, 2019	February 13, 2019	April 19, 2019
March 7, 2019	March 13, 2019	March 22, 2019	
March 22, 2019	April 17, 2019	May 2, 2019	
April 10, 2019	May 30, 2019	June 5, 2019	
May 1, 2019			Los Angeles County Public Health
May 22, 2019			May 31, 2019
June 4, 2019			
June 19, 2019	June 11, 2019		

<sup>1</sup> Torrance Refinery Action Alliance (TRAA), Communities for a Better Environment (CBE), Sierra Club, Ban Toxic MHF, and Del Amo Action Committee  
<sup>2</sup> LiUNA Local 1309, USW Local 675, IBEW Local 11, Sheet Metal Workers Local 105, and Los Angeles/Orange Counties Building & Construction Trades Council

# Key Elements of a Rule or MOU



# Key Elements of Performance Standard

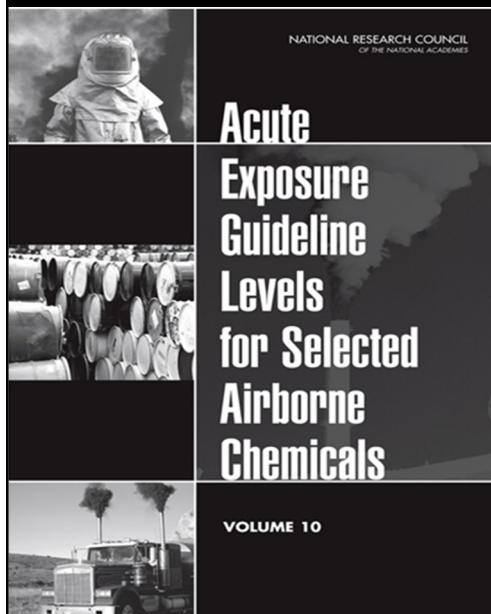


# Areas of Agreement for Key Elements of the Performance Standard

	South Coast AQMD Staff	TORC and Valero	TRAA Science Advisory Panel
Threshold	AEGL-2	X	Agree <sup>3</sup>
Mitigation Measures	Passive and Active	Agree	X
Release Locations	High Risk Locations	Agree	X
Release Hole Size	1 to 2 Inches	X	X
Computer Model	Publicly Available	Agree	Agree
Receptor Location	Fenceline	X	Agree <sup>4</sup>

<sup>3</sup> Agrees to Acute Exposure Guideline Level -2 (AEGL-2) standard for all five exposure time periods

<sup>4</sup> Agrees to fenceline and all points beyond



Thresholds



## Acute Exposure Guideline Levels (AEGL)

- AEGLs are established by U.S. EPA and scientifically reviewed
- Addresses all receptors including sensitive populations
- AEGL standards includes five specified time periods from 10 minutes to 8 hours

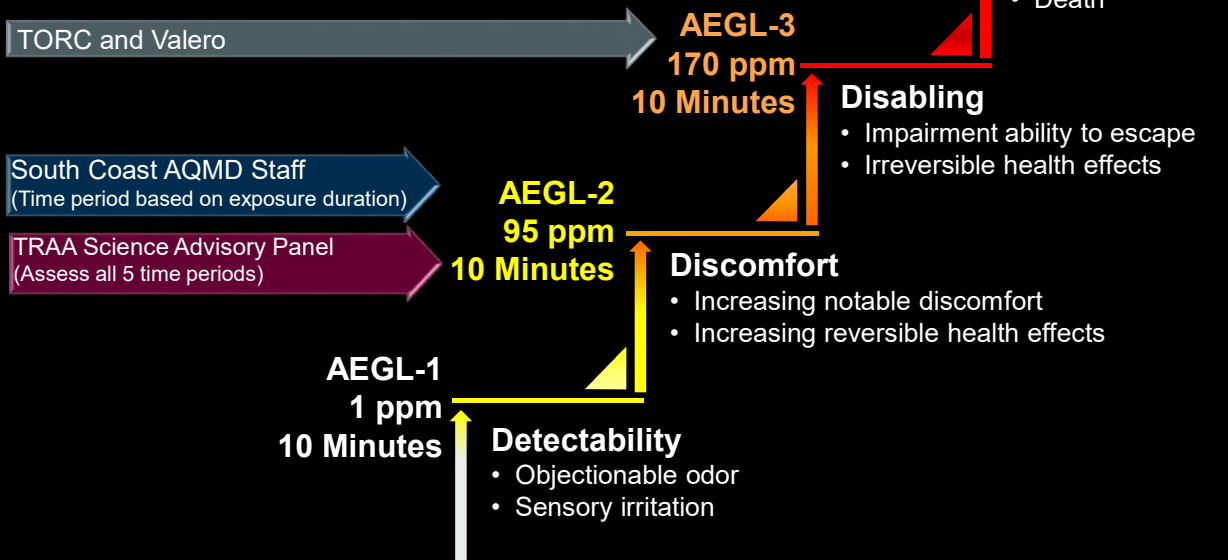
## Staff Recommendation

- AEGL-2 threshold (no irreversible health effects)
- Exposure time dictates AEGL time period

10 Minutes	95 ppm
30 Minutes	34 ppm
1 Hour	24 ppm
4 hours	12 ppm
8 Hours	12 ppm

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## HF AEGL Tiers for 10 Minute Exposure<sup>5</sup>



<sup>5</sup> USEPA Acute Exposure Guideline Levels

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## Staff Recommendation for Release Scenarios

Locations based on:

- Highest volume of HF/MHF
- Highest HF concentration
- Highest pressure and/or temperature



Staff Recommendation

- Acid Settler/Cooler
- Acid Boots Return Line
- Fresh Acid Storage
- Acid Rerun Column
- Acid Unloading Hose

TORC and Valero generally agree on release locations

TRAA Science Advisory Panel recommend maximum volume of HF/MHF released over different timeframes

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# Staff Recommendations for Release or Hole Size

## South Coast AQMD Staff

- 1 to 2 inch hole
- Based on piping in and out of equipment for scenarios evaluated
- Assuming a 1 to 2 inch pipe can sheer or develop a leak

## TORC and Valero

- 1 inch hole
- Based on concept that larger pipes will bend before breaking

## TRAA Science Advisory Panel

- Volume released
- Large volume released quickly and smaller volume released slowly

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# Mitigation Measures

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## Purpose of the Performance Standard...

Is to assess if mitigation measures can protect the public from a consequential release of HF or MHF

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## Objectives of Mitigation Measures

- Reduce the amount of HF released
- Ensure measures can mitigate HF/MHF released
- Minimize exposure to HF/MHF
- Design and include measures to meet health protective threshold



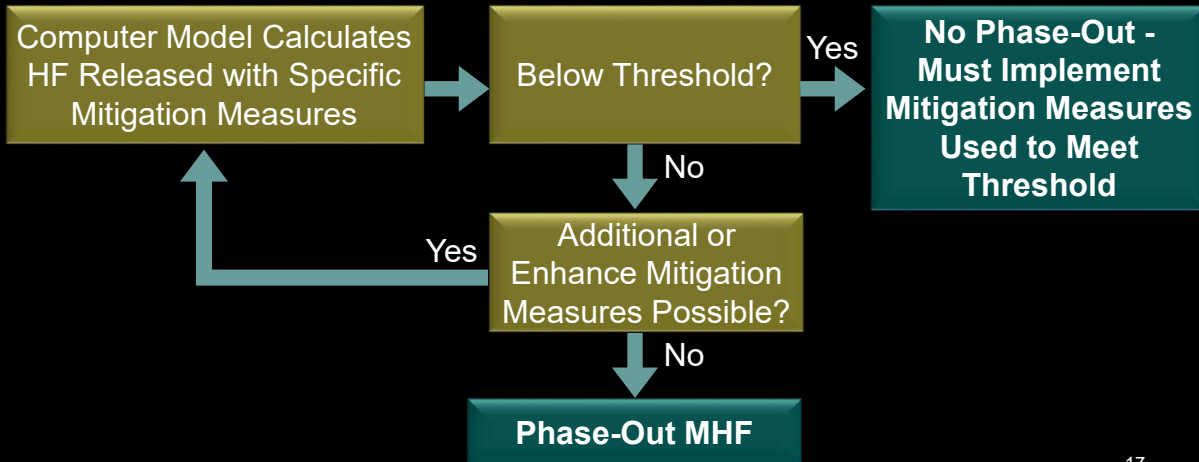
- Acid evacuation system to reduce the amount of HF/MHF released
- Assess efficacy to ensure measures can mitigate release of HF/MHF

- Additional monitors for earlier detection
- Automation for quicker response
- Barriers to slow momentum to reduce exposure



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# Overview of Performance Standard



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# Passive and Active Mitigation

- **Passive mitigation**

- Requires no human, mechanical, or energy input to function

## Passive Mitigation



Flange Shroud



Walls or Other Barriers



Belly Pans

- **Active mitigation**

- Requires human, mechanical, or energy input to function

## Active Mitigation



Control Panel for Water, Isolation Valves, and Acid Evacuation System



Water Canon



Water Spray for Pump Deluge

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# Recommendations for Mitigation Used in Demonstration

Mitigation Features	Passive Mitigation	Active Mitigation
Reduce Exposure	Yes	Yes
Improve Response Time	No	Yes
Reduce Volume of HF/MHF Released	No	Yes

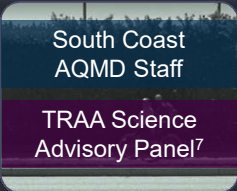
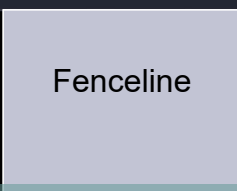


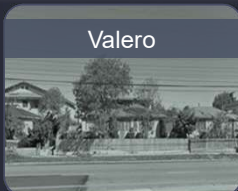
South Coast AQMD Staff  
 All Mitigation

TORC and Valero  
 All Mitigation

TRAA  
 Science Advisory Panel  
 Only Passive Mitigation



# Possible Receptor Locations and Recommendations

	 South Coast AQMD Staff  TRAA Science Advisory Panel <sup>7</sup>			
	Fenceline	Nearest Residential/Sensitive or Worker Receptor	Nearest Residential/Sensitive Receptor	Nearest Permanent Residential/Sensitive Receptor
TORC <sup>6</sup>	470 Feet	1,500 Feet	1,500 Feet	1,500 Feet
Valero <sup>6</sup>	470 Feet	1,250 Feet	2,400 Feet	4,100 Feet

<sup>6</sup> Estimated distance from acid settler to receptor location based on Google maps.

<sup>7</sup> Agrees to fenceline and all points beyond

## Can TORC and Valero Meet a Threshold of AEGL-2?

- Both refineries are proposing additional enhancements to existing mitigation measures
- Refineries have conducted initial iterations of modeling
  - Additional enhancements needed to achieve AEGL-2
- Staff is working on details such as
  - Amount of credit for each mitigation measure
  - Details regarding the modeling demonstration
  - Implementation timeframe

# Next Steps

The diagram shows a central circle labeled 'Performance Standard'. To its left is a box labeled 'Threshold' containing 'Acceptable computer model' and 'Receptor location'. To its right is a box labeled 'Mitigation' containing 'Mitigation measures allowed for Performance Standard Demonstration'. Below the central circle is a box labeled 'Demonstration' containing 'Locations within algorithm area where release will occur' and 'Hole size'. A vertical line labeled 'Health protective concentration level for specified time' connects the Threshold and Mitigation boxes.

**Performance standard is the core of an MOU or rule**

Staff Recommendations	
Threshold	AEGL-2
Mitigation	Passive and Active
Hole Size	1 to 2 Inches
Receptor	Fenceline

**Staff is seeking direction on key elements of performance standard**

MOU	Rule	Rule
		Common Operations
Meet Performance Standard or Phase-out HF/MHF	Meet Performance Standard or Phase-out HF/MHF	4 Year Phase-out
Mitigation	Mitigation	Interim Mitigation

→ Point to Rule if no agreement

**Staff is seeking direction on path forward**

- Dual path (MOU and rule)
- Pivot to rule with a performance standard
- Rule with 4-year phase-out of HF/MHF