

# Proposed Rule 1480 – Air Toxic Metals Monitoring

WORKING GROUP MEETING #7

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August 6, 2019

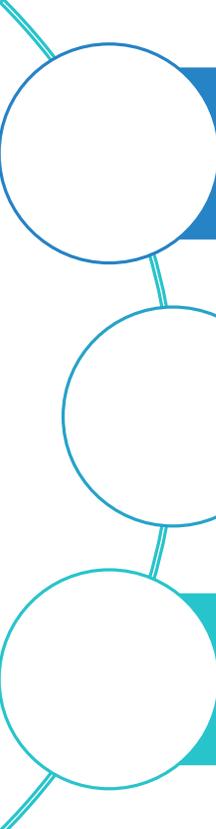
Telephone Number: (888) 450-5996

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# Meeting Agenda

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Summary of Working Group Meeting #6

Proposed Rule Language

Responses to Comments on Cost Estimates

# Summary of Working Group Meeting #6

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- South Coast AQMD general 4-Step Process to identify facility contributing to ambient levels
- Two examples how General 4-Step Process was used in Paramount and Riverside
- Initial draft proposed rule provisions
- Preliminary cost information

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# Proposed Rule Language

# Proposed Rule Language

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- Based on:
  - Concepts presented at previous working group meetings
  - Initial stakeholder comments
- Staff is seeking stakeholder feedback throughout the rulemaking process

# Proposed Rule (PR) 1480

## Structure

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- a) Purpose
- b) Applicability
- c) Definitions
- d) Designation of a Potentially Significant Facility
- e) Monitoring and Sampling Plan
- f) Metal TAC Monitoring Requirements
- g) Alternative Monitoring and Sampling
- h) Reduced Monitoring and Sampling Frequency
- i) Monitoring, Recordkeeping, and Reporting
- j) Request to Discontinue Metal TAC Monitoring
- k) Exemptions

# Purpose (a)

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(a) Purpose

The purpose of this rule is to require an owner or operator of a facility that is designated by the Executive Officer as a Potentially Significant Facility of toxic metal emissions to conduct Metal TAC Monitoring.

Potentially Significant Facility has the likely potential to exceed a cancer risk of 100 in one million or a non-cancer chronic hazard index greater than 5.0 at a Sensitive Receptor location  
(See definitions (c)(10), (c)(13), and (c)(14))

# Applicability (b)

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(b) Applicability

This rule applies to an owner or operator of any facility that receives an Initial Notice.

- Applicability to PR 1480 occurs only after
  - South Coast AQMD has been conducting ambient air monitoring of specific Metal TAC(s); and
  - Owner or operator has received an Initial Notice
- PR 1480 has a specific process to designate a facility before the owner or operator is required to conduct ambient air monitoring

# Key Definitions (c)

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**INDIVIDUAL SUBSTANCE CHRONIC HAZARD INDEX** – is as defined in Rule 1401 – New Source Review of Toxic Air Contaminants.

**MAXIMUM EXPECTED GROUND LEVEL CONCENTRATION** – greatest concentration of a specific Metal TAC as determined by air dispersion modeling calculations and emission estimates

**METALS OF CONCERN** – specific Metal TAC(s) that are identified in the notice that a facility has been designated as a Potentially Significant Facility

# Key Definitions (c) (cont.)

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**METAL TOXIC AIR CONTAMINANT (Metal TAC)** – metal air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health

**POTENTIALLY SIGNIFICANT FACILITY** – based on ambient air monitoring data, emission data, air dispersion data, or other credible data, the Executive Officer determines that a facility has the potential to exceed or has exceeded the Significant Risk Level for any Sensitive Receptor

**REDUCED RISK LEVEL** – Sensitive Receptor Cancer Risk less than 25 in one million and Individual Substance Chronic Hazard Index less than 3.0

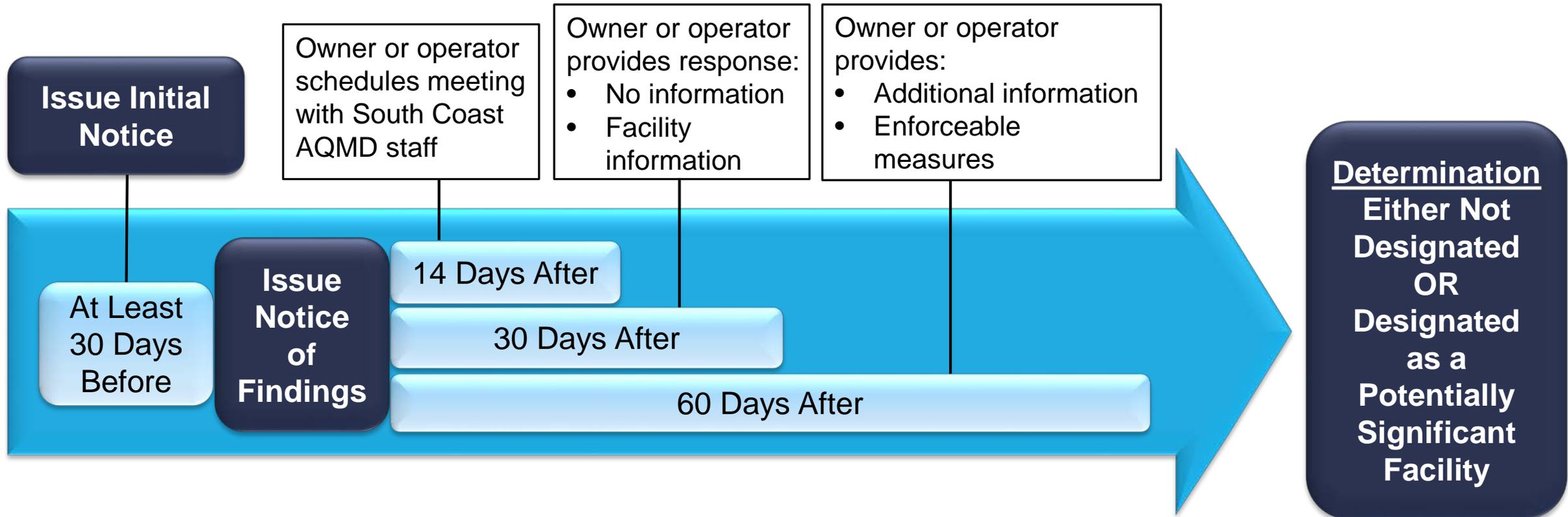
**SIGNIFICANT RISK LEVEL** – Sensitive Receptor Cancer Risk greater than 100 in one million or Individual Substance Chronic Hazard Index greater than 5.0

# Overview of Subdivision (d) Designation of Potentially Significant Facility

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- This subdivision establishes the process to designate a facility as a Potentially Significant Facility (Initial Notice, Notice of Findings, Designation of a Potentially Significant Facility)
- Provides timeframes for issuing various notifications to the owner or operator
- Establishes requirements if an owner or operator elects to provide additional information to the Executive Officer to determine if a facility is a Potentially Significant Facility
- Establishes the criteria for determining whether a facility is a Potentially Significant Facility

# Approach for Designating a Facility as a Potentially Significant Facility



# Initial Notice (d)(1)

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## (d) Designation of a Potentially Significant Facility

(1) The Executive Officer may issue an Initial Notice to an owner or operator of a facility if the Executive Officer has reason to believe the facility may be contributing to elevated concentrations of Metal TAC(s) or be emitting a substantial amount of Metal TAC emissions.

- Initial Notice would be issued if the Executive Officer has reason to believe the owner or operator may be contributing to elevated concentrations of Metal TAC(s) or may be emitting a substantial amount of Metal TAC emissions
- Added provision based on input from stakeholders
- Requires the Executive Officer to issue an Initial Notice prior to the Notice of Findings
- Provides advanced notice that Executive Officer may issue a Notice of Findings
- Provides additional lead time for owner or operator to begin gathering information in anticipation of receiving a Notice of Findings

# Use of the 4-Step Process

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- Staff would utilize the 4-step process when designating a facility
- Information collected through this process would be presented to the owner or operator in the Notice of Findings
- Prior to issuing a Notice of Findings, South Coast AQMD staff may need additional information



Step 1: Identify facility or facilities possibly contributing to air issue



Step 2: Within facility, identify the source or sources



Step 3: Determine if sources are capable of generating emissions



Step 4: Determine if emissions can be released to the ambient air

# Information Requests (d)(2)

- If needed, owner or operator may be required to submit additional information to:
  - Quantify emissions and identify the emission source(s)
  - Eliminate a facility or equipment within the facility as a source
- Executive Officer may need to conduct Metal TAC Monitoring within the facility
- Material usage, manifests, and other records can help to substantiate the presence or absence of certain toxic air contaminants

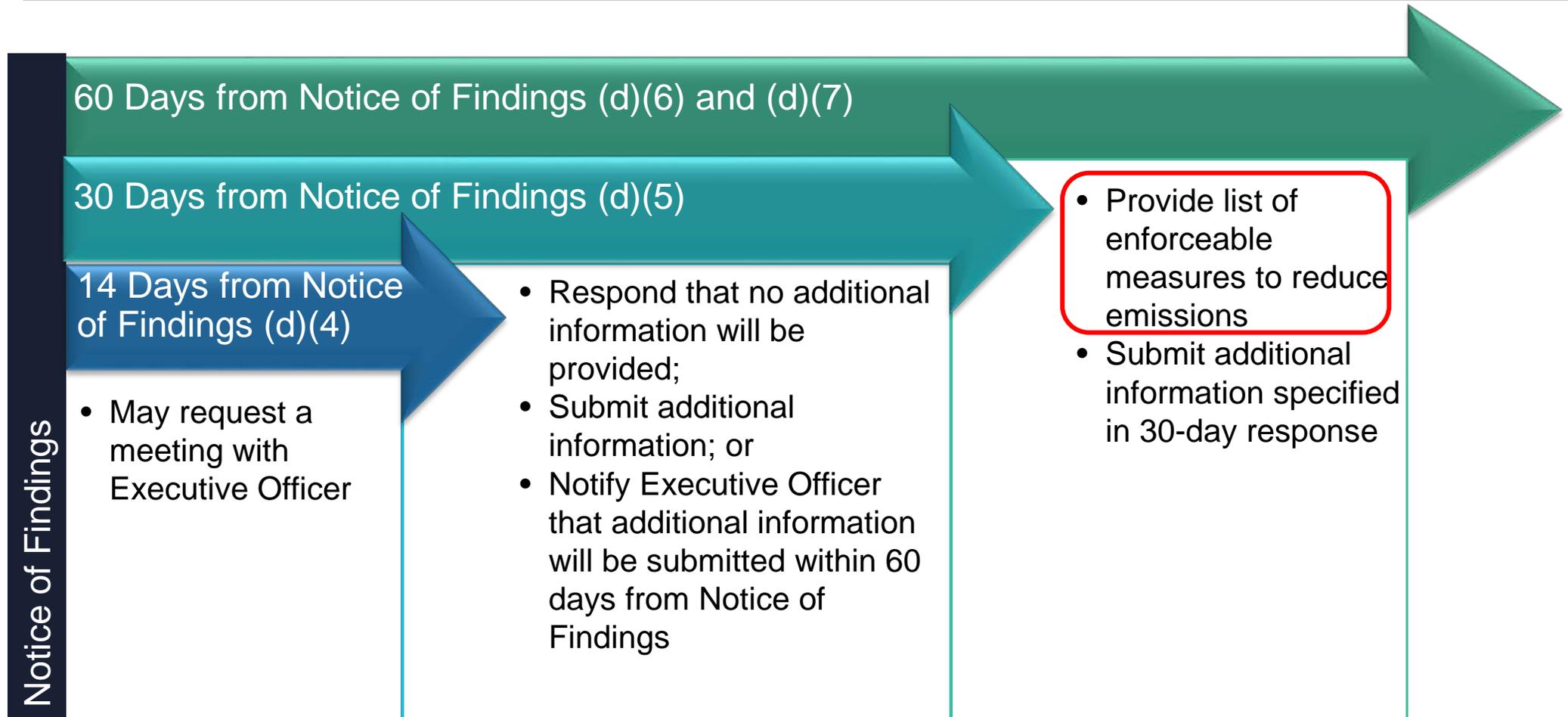
- (2) An owner or operator of a facility issued an Initial Notice shall comply with written requests from the Executive Officer, which may include:
  - (A) Conducting emissions testing and/or sample analyses, or providing the Executive Officer access to the facility to conduct such activities;
  - (B) Allowing the Executive Officer to conduct Metal TAC Monitoring for a limited duration specified in the written request; and
  - (C) Providing material usage, manifests, emissions testing results, and other records for any Toxic Air Contaminants listed in Table 1 of Rule 1401.

# Notice of Findings (d)(3)

- (3) At least 30 days following the issuance of an Initial Notice, the Executive Officer may issue a Notice of Findings to an owner or operator of a facility, which will include:
- (A) Results of Metal TAC Monitoring with information on each individual sample including the Metal TAC(s) monitored, concentration of each Metal TAC, the dates and sample locations;
  - (B) Findings that demonstrate the facility is contributing to ambient levels for the Metal TAC(s) identified in subparagraph (d)(3)(A); and
  - (C) Location of the Sensitive Receptor with the highest Sensitive Receptor Cancer Risk and/or Individual Substance Chronic Hazard Index and the values.

- Staff has incorporated a minimum time period of 30 days following the issuance of an Initial Notice based on input from stakeholders asking for advanced notice
- The Notice of Findings is the formal notification to an owner or operator that a facility may be designated as a Potentially Significant Facility
- The Notice of Findings would include:
  - Data used to designate a facility as a Potentially Significant Facility such as ambient monitoring data, emissions data, and samples
  - Metal TAC(s) and the Sensitive Receptor location with highest estimated health risk

# Owner or Operator Response to Notice of Findings (d)(4), (5), (6), and (7)



# Enforceable Measures (d)(6)

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- Based on input from the stakeholders, added a provision that allows an owner or operator to make permanent changes to reduce Metal TAC emissions
- Under paragraph (d)(6), a facility will not be designated as a Potentially Significant Facility if Metal TAC(s) are permanently reduced through enforceable measures such as:
  - Surrendering operating permits
  - Modifying Permits to Operate to reduce Metal TAC emissions from the facility

# Information Needed to Designate a Potentially Significant Facility (d)(8)

(8) A facility shall be designated as a Potentially Significant Facility based on information, including, but not limited to, the information provided in paragraphs (d)(3), (d)(5), (d)(6), and (d)(7).



# Designation of a Potentially Significant Facility (d)(9)

- Information used as the basis to designate the facility would be information collected by the South Coast AQMD and information provided by the owner or operator
- Would include Sensitive Receptor with the highest health risk and Metals of Concern that are contributing to the elevated health risk

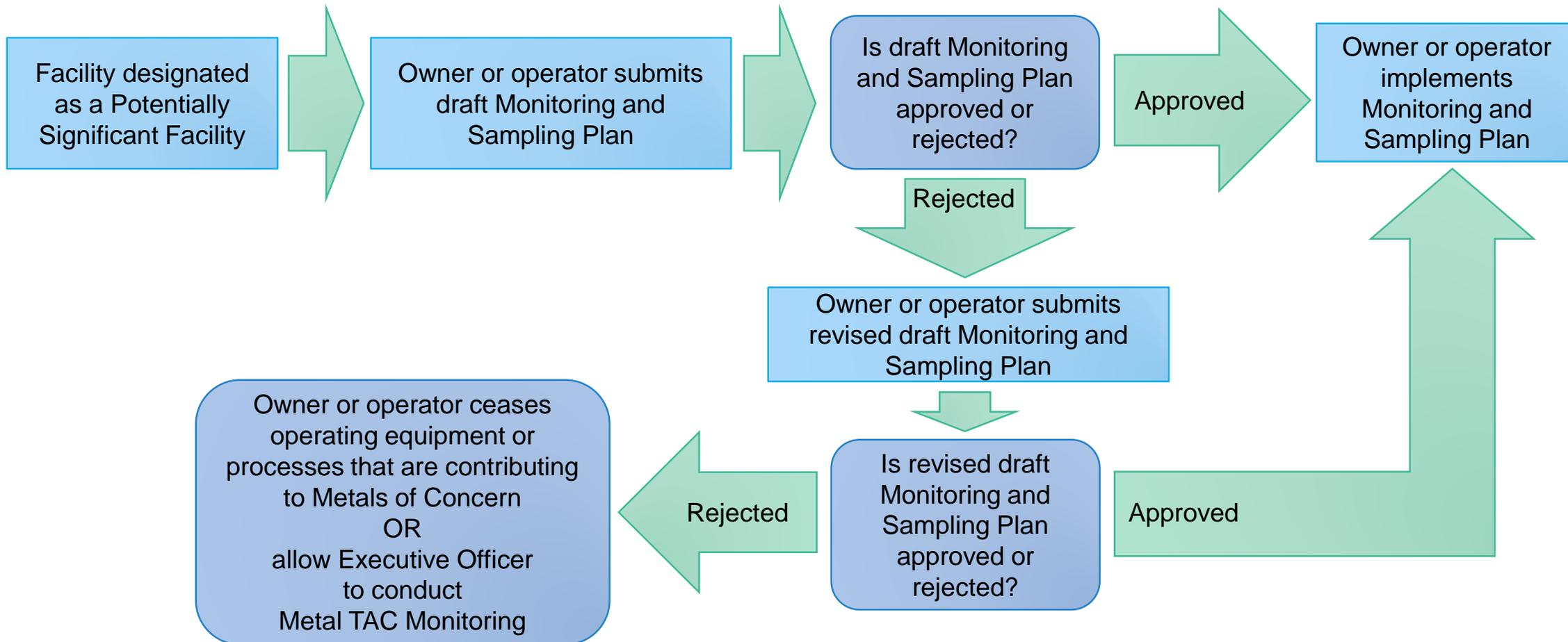
- (9) The Executive Officer will notify an owner or operator of a facility in writing if the facility has or has not been designated as a Potentially Significant Facility. A facility designated as a Potentially Significant Facility will be provided the following information:
- (A) Information used as the basis to designate the facility as a Potentially Significant Facility;
  - (B) Location of the Sensitive Receptor with the highest Sensitive Receptor Cancer Risk and/or Individual Substance Chronic Hazard Index and the values; and
  - (C) Metals of Concern.

# Overview of Subdivision (e) Monitoring and Sampling Plan

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- This subdivision establishes the information required to be submitted in a draft Monitoring and Sampling Plan
- If a revised draft Monitoring and Sampling Plan is disapproved, the owner or operator has the option to cease operating equipment responsible for Metals of Concern emissions or elect to have the Executive Officer conduct Metal TAC Monitoring
- If an owner or operator elects to have the Executive Officer conduct the required monitoring, a Monitoring and Sampling Plan is not required
- Establishes procedures if Monitoring and Sampling Plan needs to be modified based on new information or if an owner or operator makes changes affecting accuracy of the information originally submitted in Monitoring and Sampling Plan

# Overview of Approval Process for Monitoring and Sampling Plan (e)



# Monitoring and Sampling Plan Content (e)(1)

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- Purpose of Monitoring and Sampling Plan:
  - Identification of source of Metals of Concern
  - Implementation of Metal TAC Monitoring

| Identification of Sources of Metals of Concern   | Implementation of Metal TAC Monitoring  |
|--|---|
| <ul style="list-style-type: none"><li>• List of sources of Metals of Concern and operating schedules</li><li>• Existing source tests or emission reports of sources of Metals of Concern</li><li>• Map of the facility identifying key locations</li><li>• Additional process information requested by the Executive Officer</li></ul> | <ul style="list-style-type: none"><li>• Procedures for conducting Metal TAC Monitoring</li><li>• Number and locations of sampling sites</li><li>• Who would conduct Metal TAC Monitoring</li><li>• Start date of Metal TAC Monitoring</li></ul> |

# Monitoring and Sampling Plan Approval Process (e)(2)

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- Approval of draft Monitoring and Sampling Plan based on completeness of information required
- If draft Monitoring and Sampling Plan is approved, monitoring would start on date specified in the Monitoring and Sampling Plan
- If draft Monitoring and Sampling Plan is disapproved:
  - Executive Officer would identify deficiencies in disapproval letter
  - Owner or operator must revise and submit revised draft Monitoring and Sampling Plan within 30 days
- If revised draft Monitoring and Sampling Plan is disapproved:
  - Owner or operator must cease operating equipment or processes that were contributing to Metals of Concern emissions; or
  - Allow the Executive Officer to conduct Metal TAC Monitoring and the owner or operator would be responsible for the fees for conducting monitoring and sampling
- The Monitoring and Sampling Plan is not required if the owner or operator elects to have South Coast AQMD conduct Metal TAC Monitoring

# Modification to an Approved Monitoring and Sampling Plan (e)(3)

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- Executive Officer may require the Monitoring and Sampling Plan to be modified due to information, such as:
  - Additional monitors needed
  - Change in facility operation
- If the revised Monitoring and Sampling Plan is disapproved:
  - Executive Officer would identify deficiencies
  - Owner or operator must submit a revised Monitoring and Sampling Plan within 30 days
- If revised Monitoring and Sampling Plan is rejected, the Executive Officer would modify and approve the modified revised Monitoring and Sampling Plan

# Overview of Subdivision (f) Metal TAC Monitoring Requirements

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This subdivision outlines the requirements for an owner or operator to conduct Metal TAC Monitoring after the approval of a Monitoring and Sampling Plan and specifies:

- When monitoring and sampling must begin
- Minimum number of Metal TAC monitors and their locations
- Sampling frequency
- Provisions for invalid samples
- Sampling analysis

# Monitoring and Sampling Start Date (f)(1)

## (f) Metal TAC Monitoring Requirements

(1) An owner or operator of a Potentially Significant Facility shall commence Metal TAC Monitoring as specified in the most recently approved Monitoring and Sampling Plan or within 30 days after approval.

- Monitoring and sampling start date would be specified in the approved Monitoring and Sampling Plan, subject to Executive Officer approval, and would consider potential delays such as:
  - Construction of scaffolding
  - Obtaining permits
  - Connection of power poles
- If a start date is not specified in the Monitoring and Sampling Plan, the start date would be 30 days after the most recently approved plan
- Most recently approved Monitoring and Sampling Plan may be either the initial or any approved revised Monitoring and Sampling Plan

# Location of Metal TAC Monitors (f)(2)

- Monitoring locations would be specified in approved Monitoring and Sampling Plan
- Large facilities may need more monitors
- Maximum ground level concentration is determined based on location of sources and air dispersion modeling
- Monitor locations are likely to be on-site, can be off-site depending on ability to site monitors and consideration of structures and other physical constraints

(2) An owner or operator of a Potentially Significant Facility shall install Metal TAC monitors and conduct Metal TAC Monitoring at a minimum of two sample sites as approved by the Executive Officer in the Monitoring and Sampling Plan where:

- (A) The location of at least one sampling site is represents the Maximum Expected Ground Level Concentration of the Metals of Concern; and
- (B) The location of at least one sampling site represents upwind or background concentrations.

# Collection of Valid Sample (f)(3)-(f)(6)

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- Owner or operator is required to:
  - Collect one Valid Sample from midnight-to-midnight on a schedule of at least once every three days at each site
  - Record wind speed and direction at location approved by Executive Officer
- Executive Officer may require sampling on an unscheduled day due to fireworks, construction, or other atypical activities or events
- If a Valid Sample is missed, the owner or operator must notify the Executive Officer within two hours of knowing a Valid Sample was not or will not be collected
  - Only one Valid Sample can be missed over a consecutive 30-day period for each monitor



# Sampling and Analysis (f)(7) and (f)(8)

- Valid Samples must be analyzed at a laboratory approved by Executive Officer within:
    - Three calendar days of collection for any Metal TAC except hexavalent chromium
    - One calendar day of collection for hexavalent chromium
  - Analysis methods include:
    - Current ASTM D7614 for hexavalent chromium
    - U.S. EPA Method IO-3.5 for non-hexavalent chromium metals
    - Other method pre-approved by Executive Officer
  - Valid Samples or Sample Extracts (except hexavalent chromium) shall be stored for one year
  - Cannot conduct activities that may damage or bias samples
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# Alternative Monitoring and Sampling (g)

- (g) Alternative Monitoring and Sampling
- (1) An owner or operator of a Potentially Significant Facility that elects to have the Executive Officer conduct Metal TAC Monitoring shall notify the Executive Officer in writing no later than 30 days after being designated a Potentially Significant Facility.
  - (2) An owner or operator of a Potentially Significant Facility that elects to, pursuant to either subparagraph (e)(2)(C) or paragraph (g)(1), have the Executive Officer conduct Metal TAC Monitoring shall:
    - (A) Provide access to the facility for the Executive Officer to conduct Metal TAC Monitoring; and
    - (B) Pay annual operating and maintenance fees for Metal TAC Monitoring pursuant to Rule 301 - Permitting and Associated Fees; or if Rule 301 does not list a fee for Metal TAC Monitoring, pay fees pursuant to Appendix 1 of this rule.

If owner or operator elects to have Executive Officer conduct Metal TAC Monitoring, owner or operator is required to:

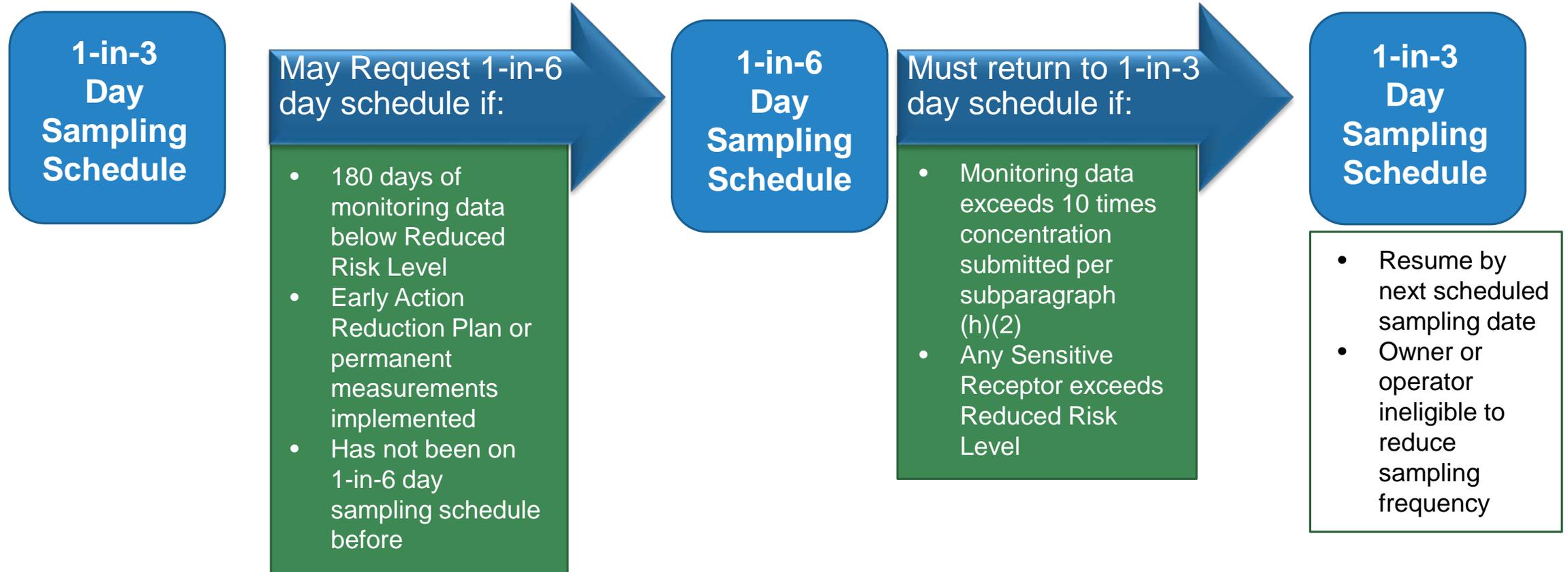
- Notify the Executive Officer in writing
- Pay fee for Executive Officer to conduct Metal TAC Monitoring
- Provide access to facility to conduct monitoring

# Reduced Monitoring and Sampling Frequency (h)

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- Owner or operator may request to reduce sampling frequency from 1-in-3 to 1-in-6 days if:
  - Concentrations are less than the corresponding concentration for the Reduced Risk Level for all Sensitive Receptors based on a rolling 30-day average for 180 consecutive days
  - Early Action Reduction Plan or permanent and enforceable measures implemented
  - Most recent 30-day rolling average concentration submitted with request
- Owner or operator reverts back to 1-in-3 days sampling frequency:
  - If the concentration exceeds ten times the concentration used as the basis for the reduced sampling frequency for three consecutive samples
  - Unless the health risks for all Sensitive Receptors are less than the Reduced Risk Level
- Owner or operator required to revert to 1-in-3 days sampling frequency shall be ineligible to modify the sampling frequency to 1-in-6 days

# Reduced Monitoring and Sampling Frequency (h) (cont.)



# Monitoring, Recordkeeping, and Reporting Requirements (i)

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## Reporting Requirements

- Monthly reports due the 21<sup>st</sup> of the following month must include:
  - ✓ Detailed monitoring results
  - ✓ 30-day rolling averages
  - ✓ Most recent 30-day rolling average concentration from data set submitted for facilities on a 1-in-6 day monitoring schedule

## Recordkeeping Requirements

- Kept for three years and must be made available at facility:
  - ✓ Housekeeping activities
  - ✓ Maintenance activities
  - ✓ Construction and demolition activities
  - ✓ Wind speed and direction data
  - ✓ Equipment calibration records
  - ✓ Raw monitoring data (analytics)
  - ✓ Monthly reports
  - ✓ Monitoring and Sampling Plan

# Request to Discontinue Metal TAC Monitoring (j)

- Potentially Significant Facility that has been monitoring and sampling for more than 180 consecutive days may submit a request to discontinue monitoring
- Information submitted to the Executive Officer would demonstrate a Potentially Significant Facility has permanently reduced emissions of Metals of Concern

## Owner or Operator Submitted Information

- 180 Days of Metal TAC Monitoring data
- Monthly Process records
- Description of enforceable measures
- Housekeeping measures
- Status of implementing a Risk Reduction Plan



## Executive Officer Approval Criteria

- Concentrations are less than Reduced Risk Level for any Sensitive Receptor
- Facility had normal operations
- Enforceable measures have been implemented
- Housekeeping measures incorporated into Risk Reduction Plan
- Risk Reduction Plan has been fully implemented

# Exemptions (k)

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- (1) Lead emissions subject to ambient air monitoring as required by Rule 1420 – Emissions Standard for Lead, Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities, or Rule 1420.2 – Emission Standards for Lead from Metal Melting Facilities, shall not be subject to this rule.
- (2) An owner or operator of a Potentially Significant Facility that elects to have the Executive Officer conduct Metal TAC Monitoring shall not be subject to subdivision (e) and paragraphs (f)(1) through (f)(7).

- Rule 1420, Rule 1420.1, and Rule 1420.2 requires lead emissions to be monitored
- Other Metal TAC emissions from facilities subject to Rule 1420, Rule 1420.1, or Rule 1420.2 would still be subject to PR 1480
- Non-Rule 1420 series facilities with lead emissions are subject to PR 1480

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# **Responses to Comments Received on Cost Estimates for Proposed Rule 1480**

# Stakeholder Comments

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- At Working Group Meeting #6 staff presented South Coast AQMD's sample analysis cost
- Working group members requested additional cost details on:
  - \$840 estimate for hexavalent chromium analysis
  - Monitoring costs of \$6,000 per week specified in letter to Governor Brown from air districts

# Air Districts' Letter to Governor – Background

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- July 12, 2017 Letter to Gov. Jerry Brown cosigned by the South Coast AQMD along with other air districts due to concerns, including lack of funding to reduce air pollution in impacted communities
- Lack of funding to the air districts to accomplish AB 617 new mandates including setting up advance sensing networks for monitoring
- Letter listed cost of \$6,000 per week or over \$300,000 per year for hexavalent chromium monitoring at a facility

# Staff Response

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- The cost of weekly monitoring of \$6,000 was based on the following:
  - Expedited turnaround (24-48 hours)
  - Staff hours were calculated at burden rates
  - 2 low volume samplers monitoring for hexavalent chromium
  - 1-in-3 day sampling schedule
  - 6 samples per week (for two monitors)
- Each sample was estimated to cost \$1,000

# Staff Response (continued)

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- Staff presented cost of \$840 per sample at Working Group Meeting #6 which included:
  - Preparation of sample (bicarbonate impregnation)
  - Staff hours for extraction and analysis
  - Staff hours for QA/QC review (data prep & analyst review, peer review, senior review, final review, and report preparation)
  - Calibration of sampling equipment
  - Expedited turnaround and at burden rates
- Staff estimates a cost of \$13,400 per monitor per year (~\$110 per sample) for sample collection and set up of monitors, monitor maintenance, and periodic audits
- Total cost estimate per sample is \$950 (\$840+\$110)

# Third Party Cost Estimates

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- At Working Group Meeting #6, staff received feedback from a variety of third party laboratories:
  - Price quotes were dependent on turnaround time
  - Price quotes varied from what was provided by laboratories
- Staff reached out to multiple laboratories that conduct hexavalent chromium and/or multi-metal analysis for price estimates and anticipated turnaround times

# Third Party Cost Estimates – Hexavalent Chromium Analysis

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- Standard turnaround time (10-14 days) for \$90-\$175
- Expedited turnaround time (1 day) for \$180-\$350
- Filter preparation for \$3-\$13
  - Cost is dependent on the number of filters being prepared
  - Discount on bulk preparation of filters
- Price includes analysis report

# Third Party Cost Estimates – Multi-metals Analysis

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- Standard turnaround time – 14 Days
  - Sample digestion - \$20
  - 1<sup>st</sup> metal - \$15
  - Each additional metal - \$10
- Expedited turnaround time – 7 Days
  - Sample digestion - \$40
  - 1<sup>st</sup> metal - \$30
  - Each additional metal - \$20
- Filter preparation
  - Weighed quartz - \$25
  - Un-weighed quartz - \$15
- Price includes analysis report

# Modification to Rule Concepts

Initial Notice provides additional time for facilities before a Notice of Findings is issued

Allows use of third party laboratories to reduce costs

No requirement for expedited sample analysis

Monthly reports due on the 21<sup>st</sup> of each month instead of 15<sup>th</sup>

Reduced sampling schedule of 1-in-6 days

Incorporated Concepts to Lower Monitoring Costs

# Next Steps

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8<sup>th</sup> Working Group Meeting: August/September 2019



Release Preliminary Draft Rule Language – September 20, 2019



Governing Board Meeting: December 2019



# PR 1480 Staff Contacts

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