



# South Coast Air Quality Management District

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**APPROACH FOR CALCULATING AND COMMUNICATING A 3-SAMPLE AVERAGE:  
AEROCRAFT, ANAPLEX, AND LUBECO STIPULATED ORDERS FOR ABATEMENT**

**Introduction**

The calculation methodology described below is intended to provide a summary of the initial approach to evaluate hexavalent chromium monitoring results near Anaplex, Aerocraft, and Lubeco especially when determining compliance with their Stipulated Orders for Abatement. For more specific details, the Orders should be referred to. Because a variety of analyses are currently underway, it is expected that this methodology may change as more information is gathered and/or refined scientific approaches are developed.

**Key Stipulated Order for Abatement Provisions for Curtailment Related to 3-Sample Average**

Before a facility is required to curtail, the SCAQMD will send an email notice and hold a conference call as described in Table 1. The District would send an email and hold the conference call at the times specified in Table 1, and if it is determined that the facility would be required to curtail, the curtailment would begin the same day.

**Table 1**

Stipulated Order for Abatement Provision	Anaplex	Aerocraft	Lubeco
<p><b>Email to Facility for Exceedance of 1.0 ng/m<sup>3</sup></b></p> <p>Upon determining that the 3-sample average exceeds 1.0 ng/m<sup>3</sup> of Chrome VI minus any applicable sub-regional background levels, the District will email the facility no later than the time specified. If the notifying e-mail is sent after that time, the conference call and curtailment, if any, will occur the following day unless the facility agrees to curtail that same day. The 3-sample average will be based on finalized laboratory results. Email must include the following:</p> <ul style="list-style-type: none"> <li>• Notification of Possible Curtailment for Exceedance of 1.0 ng/m<sup>3</sup> 3-Sample Average</li> <li>• Identification of dates, monitor, and hexavalent chromium levels for each of those dates and the 3-sample average.</li> <li>• An offer to hold a conference call at the specified time below or another mutually acceptable time.</li> </ul>	12 Noon	3:30 PM	1:00 PM

<ul style="list-style-type: none"><li>• One or more District contact persons to provide any documentation or data relevant to the conference call.</li></ul>			
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**Table 1 Continued**

Stipulated Order for Abatement Provision	Anaplex	Aerocraft	Lubeco
<p><b>Conference Call</b></p> <p>During the conference call, the facility has the opportunity to show that 1) the causes of the exceedance have been identified and remediated, and/or 2) that the offsite monitoring results were not caused by the facility.</p>	2:00 PM	5:30 PM	3:00 PM
<p><b>Follow-up Email from the District to the Facility</b></p> <p>District staff will send a follow-up email to the facility notifying the facility of the disposition of curtailment after the conference call prior to the time curtailment is required to begin.</p> <p>If it is determined that the facility will not be required to curtail, the email should state:</p> <ul style="list-style-type: none"> <li>• The basis of the decision not to curtail.</li> </ul>	After Conference Call and Before Curtailment	After Conference Call and Before Curtailment	After Conference Call and Before Curtailment
<p><b>Beginning of Curtailment</b></p> <p>If the District has determined in its follow-up e-mail that the facility is required to curtail, then the facility must cease its operations consistent with the Stipulated Order for Abatement by the following times that day.</p>	4:30 PM	Midnight	4:30 PM

**Table 1 Continued**

Stipulated Order for Abatement Provision	Anaplex	Aerocraft	Lubeco
<p><b>Notification to Resume Operations</b>                      The District will notify the facility by email when the 3-sample average based on finalized laboratory results and minus any applicable sub-regional background levels is <math>\leq 1.0 \text{ ng/m}^3</math> and they are allowed to resume full operations after notification.</p>	Upon data validation	Upon data validation	Upon data validation

**3-Sample Average Calculation**

- The three most recent valid samples are included in the average.
  - If a sample is invalid, use the most recent previous sample that is valid. See Table 2 for examples.
  - Samples can only be averaged for each site (No averaging over multiple sites)

**Table 2**

Day 1	Day 4	Day 7	Day 10	Day 13	3-Sample Average		
					1 <sup>st</sup> Average	2 <sup>nd</sup> Average	3 <sup>rd</sup> Average
1.0	1.5	2.0	Invalid	0.30	<b>1.5</b> <i>(Days 1, 4, 7)</i>	<b>1.5</b> <i>(Days 1, 4, 7)</i>	<b>1.3</b> <i>(Days 4, 7, 13)</i>
1 <sup>st</sup> Average Period							
2 <sup>nd</sup> Average Period							
3 <sup>rd</sup> Average Period							

 Hatched shading indicates sample has been substituted for Invalid data during the Average Period.

- Calculate a 3-sample average using a level of precision to the nearest hundredth of a  $\text{ng/m}^3$ . Report 3-sample average rounded to the nearest tenth of a  $\text{ng/m}^3$ 
  - If the average is less than or equal to  $1.0 \text{ ng/m}^3$ , then no curtailment is required.
  - If the average is greater than  $1.0 \text{ ng/m}^3$ , then further refinement of the average can be considered.

### **Refinements to the 3-Sample Average Calculation Approach**

Refinements to the 3-sample average as determined by the District are allowed on a sample-by-sample basis described below. Sub-regional background levels are first subtracted to determine whether initial notification of possible exceedance is required.

- **Refinement 1: Subtracting sub-regional background levels of Cr VI**
  - Subtract either:
    - the value from the lowest monitor in the Paramount area on that sampling day; or
    - the average level found from the nearest MATES-IV site (Compton) (0.11ng/m<sup>3</sup>) if a sub-regional background cannot be determined from the monitors in the Paramount area (due to meteorological conditions, data from other monitors, or the influence of Paramount sources)
- **Refinement 2: Subtracting known or suspected contributions from other known sources**
  - Consideration of other sources must include analysis of meteorological data from the days each sample was collected, and any applicable upwind monitoring data, if available.
  - Specific sources should be identified as contributors before subtracting any potential contribution. Emissions from unidentified or unverified 'other sources' cannot be considered as contributors to a source-specific monitor.
  - Until more detailed information is available, staff will assume that Cr VI levels from a source are reduced 5-fold approximately 500 feet downwind in the vicinity of Anaplex, and Aerocraft.
- **Refinement 3: Use of Other Pertinent and Verifiable Information**
  - Other pertinent information could include evidence that the facility has identified and remediated the source or sources for exceedance.
    - An example of this could be if the facility demonstrates that its pollution control equipment went down because of an unscheduled power shortage and that power has subsequently been restored.