



May 10, 2023

Electronic submittal: <https://www.arb.ca.gov/lispub/comm/bclist.php>

Hon. Steven S. Cliff, Ph.D., Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Second Notice of Public Availability of Modified Text and Availability of Additional Documents and Information on the Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations

Executive Officer Dr. Cliff:

The Metal Finishing Association of Northern California [MFANC], Metal Finishing Association of Southern California [MFASC] and National Association of Surface Finishers [NASF] have the following comments regarding the Second Notice of Public Availability of Modified Text and Availability of Additional Documents and Information on the Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations [ATCM].

The associations support and reiterate the reasoned comments and specific requests submitted to the record by counsel Charles Pomeroy which conclude:

“New data and a revised Table 1 show lower actual emissions than were previously analyzed, but the latest changes failed to address the Record as it was previously prepared. Moreover, these lower values have not been evaluated and compared to the significant increase in excess hexavalent chromium emissions that would be generated due to increased transportation resulting from the adoption of the Proposed Amendments. The accuracy of the Record currently is in question, particularly since there appears to be continuing errors in and problems with the latest Second Revised Inventory.

“We believe the issues as outlined in this letter (and the April Letter) affect the core of the information used to prepare the Proposed Amendments. The MFACA believe it appropriate to withdraw the Proposed Amendments from the hearing scheduled this month. Further, the MFACA believes a meeting with CARB would be the next step to further evaluate the Proposed Amendments with accurate data and appropriate criteria. Without accurate emissions data, the regulated community and other stakeholders cannot be assured that the Proposed Amendments are based upon a proper foundation, and thus, the threat of a potential increase of risk to human health and the environment in California is possible should decisionmakers do nothing further.”

In support of Mr. Pomeroy’s comments and requests, we emphasize the following:

CARB’s revised hexavalent chromium emissions from 2019 are only 1.05 pounds for the entire plating industry in California and only 0.093 pounds for decorative – but the actual emissions are even lower.

- Source test data that CARB has access to strongly suggests that emissions are even lower than what CARB is reporting.
- Implementation of the stringent controls on hexavalent chromium operations imposed in South Coast have reduced hexavalent chromium emissions even further.

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- CARB has only included revisions suggested by industry that increase emissions and have ignored the industry's information that would reduce emissions even further based on source test data and actual emissions.
- An emissions-based rule is more appropriate and effective than bans – see SOUTH Coast Rule 1469 that was in large part designed to address fugitive emissions.

Based on actual emissions data, most, if not all, facilities are below risk levels of concern.

Removal of all hexavalent chromium emissions from the plating industry would do little, if anything, to reduce risk as the revised emissions data represent less than 1% of total hexavalent chromium emissions in California – even less so with the removal of decorative hexavalent chromium plating.

CARB's rulemaking process is fatally flawed because it has failed to recalculate the environmental impact analysis with the revised emissions data.

Without considering all of the available information as revised by CARB staff and the additional revisions provided by industry, CARB's approval of this rule and the bans of hexavalent chromium plating would be arbitrary and capricious.

With its revised emissions data at the eleventh hour (even though CARB has had access to this data and ignored the comments from industry over the past three years), CARB has failed to provide a meaningful opportunity to comment on the basis and justification of the rule.

On November 29, 2022, CARB staff released the draft ATCM and then almost immediately withdrew Appendix B Table 1 because stakeholders quickly noted that it was incorrect. The reply was that corrections would be made in the 15-day document. On March 28, 2023, the public saw the first 15-day document. Stakeholders were prevented from being able to review the "correct" data that is fundamental to the entire ATCM update for four months. That first draft table was essentially illegible and this had been acknowledged.

The technology review for decorative plating prior to the 2030 ban deadline is needed to ensure that viable alternatives are available to decorative hexavalent chromium plating based on available technology, customer specifications and product performance demands.

The emissions inventory provided and subsequently revised by CARB demonstrates that CARB has not adequately explored HEPA efficiencies as Best Available Control Technology [BACT]. The emissions inventory [Table 1 and Table 2] reveal that CARB did not comprehensively assess the extent of current HEPA control deployment or the actual efficiency across a representative number of facilities.

This is true as it relates to stack emissions and to fugitive emissions. The proposed rule structure, featuring a ban, pre-dates an accurate assessment of HEPA source-tested emission rates by a year. Therefore the "ban" portion of the rule is arbitrary and unreasonable. It creates a cost for California without an adequate offsetting benefit. It fails to acknowledge platers who choose to locate in areas where there is no residential population.

To most accurately estimate the chrome plating industry's emissions we need two bits of data that CARB is uniquely positioned to acquire, the facilities' throughputs and their emission rates. The throughput is typically measured in amp-hrs and the emission rates are source tested for most facilities and measured in milligrams per amp-hour (mg/amp-hr). If these numbers are multiplied, you get the facility's plating emissions in milligrams.

This is critical information about an industry that is facing a ban. It is the most accurate data regarding the actual emissions profile of this industry. An accurate emissions inventory should have been the very first requirement of this rulemaking, not the very last, as it is now.

Very early in the rulemaking process, we requested this information from CARB staff. Specifically, we requested amp-hour

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consumption data and source test emission rate data (mg/amp-hr).

In June of 2021, we received a list of 142 companies. Only 107 of these facilities had amp-hours listed. That list included the company name, city, air district, the type of facility (Hard Chrome, Decorative, or Anodize), and the control equipment. Also listed were the facilities' 2019 amp-hours, the "emission factor", and an "emission" value. This was simply the 2019 amp-hours times the maximum emission factor that the 2007 ATCM rule allows depending on the type of control equipment. To be clear, this is not actual emissions, but one type of maximum allowable emissions.

But no actual source tested emissions data.

Staff released the draft ATCM document on November 29, 2022. In Appendix B there are Tables 1&2 that list facility emissions inventory calculations and source tests results averaged by process, respectively. Immediately upon release stakeholders on all sides recognized the Table 1 data was severely flawed. The most obvious error was the misalignment of data in the rows of information, but there were many errors that couldn't be teased out until this first major flaw was corrected. Staff claimed they would correct this table in the 15-day documents. The assumption was that they would correct all the flaws. No one had correct information at the January 27th, 2023 Public Hearing.

March 27, 2023 staff released their 15-day document. Attachment 2 Table 1 was supposed to replace the original Table 1 of Appendix B. The new table was still severely flawed. They corrected the mismatch of facility rows and corresponding data, but by matching the facility amp-hrs with the June 2021 list it showed many errors. These are errors that staff could have, and should have, caught because they have the full data set. The errors we could find were reported during the comment period. But stakeholders were robbed of time to review the data, the two months between the November release and the January Public Hearing, and the additional two months after the hearing until the March release. For these four months the interested parties couldn't review the whole proposed rule package for accuracy.

No one could comment on the original useless data and then when they got the data, they couldn't comment on anything but the corrections to the data. Staff repeatedly stressed that the comments submitted during 15-day document comment period were restricted to only the few corrections that were made, not the corrected document as a whole. We wanted a true, correct, and whole document and our comments reflect that.

A second 15-day document was released April 26, 2023 with another "corrected" table. The only substantive correction was the attention paid to the emissions rate for hard chrome plating. The average emission rates were calculated earlier in Table 2 of Appendix B. The specific correction apparently fixed a typo in the emissions rate from 0.0000588 mg/amp-hr to 0.000588 mg/amp-hr. The chromic acid anodize Average Source Tested Emission Rate is still considered 0.00000029 mg/amp-hr. This is ridiculously low. If this were true then all the anodizers combined would emit 0.127 mg per year and should be exempt. We mentioned this before and it's still not been corrected. We don't want skewed facts, in any direction. Again, we are looking for the truth and there are still more errors, but only the comments that address the very narrow prior corrections will be considered.

We requested the corresponding source test emissions factor data verbally and in writing several times over 2 years. We've been assured the data is coming, but we have not received all this data. Then only recently we were told that we needed to submit an official information request, which we did the same day. We recently received a 10-day letter informing us that in 30 additional days we will be provided the information we've requested, or an estimate of when we can expect these records, or the reasons, if any, why these records are being withheld.

In Table 1 Staff uses the phrases, "2019 Emissions based on 2007 ATCM Emission Factors (lb/year) (Calculated)", "Potential to Emit (lb)", "Permitted Emissions based on Source Tested Emission Factors (lb/year) (Calculated)", and "2019 Emissions based on Source Tested Emission Factors (lb/year) (Calculated)" in several places. This confuses matters as it implies that any of these are actual emission values. Facilities are not allowed to obfuscate these calculations in their reports to the air districts. If the point is to show that facilities could have greater emissions, then simply show the maximum potential emissions (permitted amp-hrs X maximum 2007 ATCM emission rate), and label them so. Also list the accurate actual emissions as well. "This is what

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could be emitted vs. this is what's actually emitted." Anything else has no value but to confuse. If there is a legitimate concern about the potential emission, consider reducing permitted amp-hours instead of a ban. If there is a legitimate concern about fugitive emissions consider permanent total enclosure as it was proposed, instead of a ban. PTE is considered to have a 100% capture efficiency.

We've been reaching out to facilities directly to confirm their data and we're discovering several different types of discrepancies.

- We've discovered the inclusion of several facilities that are no longer in business. This overinflates emissions.
- There are over 170,000,000 amp-hrs that cannot be correlated with the earlier June data and over 13,000,000 amp-hrs listed in the June data that doesn't match up with the newer tables. It is unclear how this affects emissions.
- There are facilities that staff assumes to have lesser controls than they actual do. For example facilities that are assumed to be using fume suppressant only, but in fact now have HEPA. This overinflates emissions.
- 14 of the 111 facilities have the same 2019 Facility Reported Throughput (amp-hrs)(Reported) as their Permitted Annual Throughput (amp-hrs)(Reported). This looks suspiciously like throughput data was missing and the max permitted amp-hrs were entered as if they were reported amp-hrs. Most of these are anonymous companies that we can't contact to confirm. The one facility we were able to confirm with, CARB entered their permitted value as their self-reported value. Their actual self-reported value was <10% of their permitted value. There is also an anonymous facility that has a max permitted value of 41,328,000 amp-hrs and that value was entered as their self-reported usage too. If we accept these values as correct (which we don't), all 49 decorative shops in the state consume 55,571,465 amp-hrs, and one shop accounts for 74%. This overinflates emissions.
- Staff used a simple average to estimate emissions rates for all facilities. In an ideal representation of this industry, each facility would have a throughput number and a source test emissions rate number. Multiplying the two together yields the facility's plating emissions. A simple average of a few, sometimes a single, data point(s) is not appropriate. We suggested a weighted average based on throughput. Larger facilities have more potential to affect emissions, they should have more effect on the average. For each facility that has both numbers, use both numbers. For facilities that are missing source test data use a weighted average. Apply this, just as staff did, to similar facilities (hard chrome, anodize, decorative w/ HEPA, and decorative w/out HEPA). We propose the average be calculated as follows:

For facilities with both throughput and source emissions data, calculate each shop's emission and add them up.

Likewise, add the throughputs of these same facilities together.

Divide the total emissions by the total throughput. This yields the weighted average emission rate for the remaining facilities of a similar type. In the example below, if there were only these 8 facilities, this we give the exact results, whereas the simple average, as staff calculated, would render an average of 0.0003680 mg/amp-hr. (62.5% higher emissions than actual 0.0002264 mg/amp-hr).

Chromic Acid Anodize emissions rates (Weighted average vs. Simple average)

Facility Type	Controls	Throughput	Confirmed Source Test	
			Emission Rate	Emission
		amp-hrs	mg/amp-hr	in mg
ANO	CFS, HEPA	655,875	0.0000880	57.72
ANO	HEPA	484,349	0.0002310	111.9
ANO	CFS, HEPA	388,833	0.0000640	24.89
ANO	HEPA	117,689	0.0007100	83.56
ANO	HEPA	104,168	0.0010000	104.2
ANO	CFS, HEPA	50,460	0.0005900	29.77
ANO	CFS, HEPA	20,999	0.0000213	0.447
ANO	HEPA	14,425	0.0002400	3.462
Totals		1,836,798 amp-hrs	0.0029443 mg/amp-hr	415.9 mg

Total emissions (in mg) / Total Throughput (in amp-hrs) = Weighted Average

415.9 mg / 1,836,798 amp-hrs = 0.0002264 mg/amp-hr

Sum of Confirmed Source Test Emission Rates / Number of Sources = Simple Average

0.0029443 mg/amp-hr / 8 Sources = 0.0003680 mg/amp-hr

Decorative Chrome Plating emissions rates (Weighted average vs. Simple average)

Facility Type	Controls	Throughput	Confirmed Source Test	
			Emission Rate	Emission
		amp-hrs	mg/amp-hr	in mg
DEC.	CFS, MFS	982,191	0.0006300	618.78
DEC.	CFS, POLYBALLS	250,952	0.0001520	38.14
DEC.	CFS, fume hood and mesh pad.	29,378	0.0003200	9.40
DEC	CFS, HEPA	1,485,252	0.0000260	38.62
Totals		2,747,773 amp-hrs	0.0011280 mg/amp-hr	704.94 mg

Total emissions (in mg) / Total Throughput (in amp-hrs) = Weighted Average

704.94 mg / 2,747,773 amp-hrs = 0.0002566 mg/amp-hr

Sum of Confirmed Source Test Emission Rates / Number of Sources = Simple Average

0.0011280 mg/amp-hr / 4 Sources = 0.0002820 mg/amp-hr

Hard Chrome Plating emissions rates (Weighted average vs. Simple average)

Facility Type	Controls	Throughput amp-hrs	Confirmed Source Test Emission Rate mg/amp-hr	Emission in mg
HARD	HEPA	116,476,081	0.0000107	1,240.47
HARD	HEPA	61,239,208	0.0000120	734.87
HARD	MFS, HEPA	57,942,267	0.0000198	1,147.26
HARD	HEPA	10,195,736	0.0004350	4,435.15
HARD	MFS, HEPA	8,177,990	0.0000070	57.25
HARD	HEPA	4,071,963	0.0000230	93.66
		258,103,245	0.0000299	7,708.64
Totals		258,103,245 amp-hrs	0.0005075 mg/amp-hr	7,708.64 mg

$$\text{Total emissions (in mg)} / \text{Total Throughput (in amp-hrs)} = \text{Weighted Average}$$

$$7,708.64 \text{ mg} / 258,103,245 \text{ amp-hrs} = 0.0000299 \text{ mg/amp-hr}$$

$$\text{Sum of Confirmed Source Test Emission Rates} / \text{Number of Sources} = \text{Simple Average}$$

$$0.0005075 \text{ mg/amp-hr} / 6 \text{ Sources} = 0.0000846 \text{ mg/amp-hr}$$

- With each data point that a facility shares we get a more accurate picture of the industry as a whole. Using information from the 104 facilities that we have confirmable throughput data and the 20 source tested emission rates that we can correspond to throughput data, so far (and therefore use in a weighted average), the entire industry emits 25.4 grams per year (0.06 lbs).

The bottom line is that it appears that staff does not consider the emissions inventory worth the investment required to portray the reality of this industry. There have been so many errors, and so many different kinds of errors, and errors so often, that it brings into question every stated fact and calculation. Every assumption and estimation. If they are getting the information that we can check wrong, what else might be wrong?

There is concern over transparency. We can't check their work, if they don't show their work. We imagine the Board assumes staff is correct until given a valid reason to suspect otherwise. So the Board is not checking the facts preemptively. Apparently, there is no internal audit of the data among the staff, and if there were, that would be disturbing. So that leaves it to stakeholders to level a critical eye.

The argument that staff presents in their Initial Statement of Reason (ISOR) is that the chrome plating industry is a concerning risk to the communities in which they operate. They claim it is worthy of banning the usage of a primary material, in most cases without any alternatives. Why? Because of two things, emissions and proximity. There is a lot of hand waving generalizations about both. There are assumptions and estimations, but very little facts and data. Table 1 is about data. Do the actual emissions support these claims? The first crack at this data was useless. Without this data there is no real support for any argument. Staff has had 2 ½ years to acquire good quality information from the districts. This is a cohort of roughly 111 facilities. They could have focused on one facility per week and had a fully accurate table with consumption, source test results, and sensitive receptor distances (and possibly even HRA's), but they didn't. They asked for data from facilities involved in the rulemaking discussions and then didn't use it. If information is not available freely or timely; if the information that is available is flawed beyond use and never fully corrected; if this data that shows the emission profile of an entire industry is regarded so poorly that

major, wholesale corrections don't warrant a reevaluation of any other documents; then the legitimacy of the entire rulemaking process is suspect.

As these comments, those submitted by counsel Charles Pomeroy, and our previous comments together confirm, over the course of the development of the modifications to the ATCM, inaccurate and ever-changing data has been set forth in the documents. This has affected the Board, the press, the public and this rulemaking. It supports a perspective that a decision was already made to impose bans regardless of the facts.

The board must reject the staff recommendation for any ban of decorative or functional hexavalent chrome plating. As BACT technologies improve and as hexavalent chrome replacements emerge and mature, the MFACA will work with CARB to assure that industry minimizes emissions. We encourage the board to work with us within the framework of an emissions based rule.

Sincerely,

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