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Via 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: Public Comments – Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations

Dear Mr. Cliff:

On behalf of our client, the Metal Finishing Associations of California (the Metal Finishing Association of Southern California [MFASC] and Metal Finishing Association of Northern California [MFANC], collectively, the "MFACA"), which operate facilities using hexavalent chromium ("chrome plating facilities"), we provide these comments to the March 27, 2023 *Notice of Public Availability of Modified Text and Availability of Additional Documents and Information* on the *Proposed Amendments to the Airborne Toxic Control Measure [ATCM] for Chromium Electroplating and Chromic Acid Anodizing Operations* (the "Proposed Amendments") (hereinafter the "Supplemental Notice" or "SN").

By necessity, information contained in the Notice shall refer to various portions of the SN including the newly issued emissions inventory replacing the one found at the Initial Statement of Reasons ("ISOR"), Appendix B, Table 1 ("Revised Inventory") as well as portion of the prior record posted November 29, 2022 as the Public Hearing Notice and Related Material for the ATCM (hereinafter the "Notice") as well as the record from the January 26, 2023 public hearing before the California Air Resources Board ("CARB") (the "Hearing") and comments from the public. Collectively, the Notice, Supplemental Notice and Hearing and all prior comments constitute the "Record" to date.

Issues and Requests

New information published as part of the Supplemental Notice identifies three significant problems with the Proposed Amendments. First, this information demonstrates that actual hexavalent chromium emissions from chrome plating facilities are much lower than previously reported and have not been properly analyzed or corrected throughout the Record. Second, because the newly reported hexavalent chromium emissions from chrome plating facilities are much lower, the Proposed Amendments, if adopted, will increase the existing amount of

hexavalent chromium emissions in California, endangering public health. Third, the new emissions inventory that replaced a prior version, continues to contain errors and improper assumptions, which lead to confusion and improper conclusions, thereby undermining the accuracy of the information that is the cornerstone of the Proposed Amendments and all their assumptions.

Based upon the foregoing issues that fundamentally affect the legality of the Proposed Amendments as presently prepared, the MFACA respectfully requests that CARB: (1) Withdraw the Proposed Amendments from their presently scheduled hearing; (2) Meet with the MFACA commenting parties to discuss further alternatives to an absolute ban including risk (based on existing local limits) and proximity, in light of the information and issues set forth in this letter; (3) Provide the MFACA commenting parties with all data, including source test information, that CARB has failed to provide to date and (4) Re-do its analyses and justification for the Proposed Amendments based on the corrected/revised emissions data and permit hexavalent chrome plating facilities and other stakeholders a meaningful opportunity to review and provide comments on the revised analysis and justification for the Proposed Amendments.

Background

To properly frame our comments to the Supplemental Notice, some background information, which is only implied in the Record, needs to be established and stated explicitly concerning the total universe of annual hexavalent chromium emissions in pounds within California. The ISOR (produced within the Notice) describes the statewide annual emissions of hexavalent chromium as being generated by 91% mobile sources, and 9% from non-combustion sources (i.e., stationary sources). ISOR at pages 177, 182. Staff estimates 0.4 percent of the hexavalent chromium emissions from all emission sources originate in chrome plating facilities (and approximately 4% of the 9% non-combustion sources). ISOR at page 182. According to this same ISOR, all chrome plating facilities actually emit 2.2 pounds per year. ISOR at page 188, Table VI.1.

From this presented information in the ISOR, one may determine the universe of annual hexavalent chromium emissions in California to be as follows:

2.2 pounds per year/0.004 [0.4%] = 550 pounds per year

As stated in the ISOR, only 0.4% of all California hexavalent chromium emissions are deemed to originate from chrome plating facilities, meaning the universe of statewide hexavalent chromium emissions total a rather substantial 550 pounds per year.[1]

After completion of the ISOR and following the January 2023 hearing, CARB staff completed the Inventory and issued a new Table VI.1. in the Supplemental Notice. SN, Attachment 2, at page 24. In that new Table VI.1, the actual emissions from all chrome plating

[1] If CARB is applying a higher value to the chrome plating facilities based on *estimated* emissions, then the statewide universe of hexavalent chromium emissions is substantially larger too. For the purpose of this comparison in the ISOR, CARB staff used actual emissions, not hypothetical or potential emissions. If hypothetical emissions (e.g., 10.15 pounds of annual hexavalent chromium emissions) had been used as they were in other parts of the Record, the statewide hexavalent chromium emissions would have increased to over 2,537.5 pounds.

facilities total 0.19 pounds per year, not 2.2 pounds per year as previously reported. Id. This fundamental change in value, which is now revised to be more than 11 times lower, alters the prior evaluation of emissions explained in detail throughout the ISOR. Specifically, this lower emissions value must now be compared to the known statewide hexavalent chromium emissions (i.e., 550 pounds). The new value of annual hexavalent chromium emissions from chrome plating facilities is no longer 0.4 percent of the total as previously reported in the ISOR but is the following:

0.19 pounds per year/550 pounds per year = 0.00035 [.035%]

Considered another way, the annual emission value for all chrome plating facilities now represents approximately 0.35% of the total non-combustion sources. In other words, the focus of these Proposed Amendments, and their proposed ban, is focused upon a minute fraction of the total statewide emissions of hexavalent chromium, whether this fraction be considered for the total emissions or just emissions from non-combustion sources.

What is probably more troubling about this new information found in the Supplemental Notice is the failure to re-evaluate and correct the entire Record to reflect this fundamental change that alters every understanding of the risk and exposure found in the Record, from the original ISOR and subsequent CARB staff testimony, to the California Environmental Quality Assessment ("CEQA") determinations and the Standardized Regulatory Impact Assessment ("SRIA") evaluation. Without a complete and thorough re-evaluation and correction, it is impossible for the CARB decisionmakers to make a knowledgeable determination and decision on the Proposed Amendments. Any subsequent court action for abuse of discretion under a "substantial evidence" standard would by necessity consider this fundamental change carefully when reviewing a fatally flawed record.

This new emissions inventory and actual emissions are significant to the Record and require a re-evaluation of every aspect that has been prepared, including the assumptions that underlie the need for a ban of chrome plating facilities. These assumptions can be summarized with a pair of quotes from the ISOR:

> It [hexavalent chromium] was identified as a compound that has the potential to cause cancer with no associated threshold for cancer initiation. This means there is no level of emissions below which exposure to hexavalent chromium would be safe.
>
> …
>
> Due to the high toxicity level of hexavalent chromium, the health impacts of exposure to hexavalent chromium, the proximity of chrome plating facilities to sensitive receptors and disadvantaged communities, and following extensive evaluation of air monitoring data, a zero emission level is necessary to prevent an endangerment of public health. ISOR at pages 1-2, and 5.

As noted below, the first statement above is inconsistent with CARB's own posted information. Supra, at page 6. Concerning the second statement, each point can be considered and refuted based upon the new emission inventory (SN, Attachment 2, Table 1 at pages 3-22), revised Table VI.1 (SN, Attachment 2, Table VI.1) and further information produced in the Supplemental Notice. For the reason sets forth herein, a zero-emission level is neither necessary, nor warranted.

Statutory Framework

Health & Safety Code Chapter 3.5, Toxic Air Contaminants (H&S Code Sections 39650-39675) establish the basis to prepare the Proposed Amendments and provide mechanisms to consider various aspects of toxic air contaminants. Section 39666 provides the two mechanisms to consider toxic air contaminants based on whether (or not) the substance has a threshold exposure level. It provides in relevant part as follows:

> (b) For toxic air contaminants for which the state board has determined, pursuant to Section 39662, that there is a threshold exposure level below which no significant adverse health effects are anticipated, the airborne toxic control measure shall be designed, in consideration of the factors specified in subdivision (b) of Section 39665, to reduce emissions sufficiently so that the source will not result in, or contribute to, ambient levels at or in excess of the level which may cause or contribute to adverse health effects as that level is estimated pursuant to subdivision (c) of Section 39660.
>
> (c) For toxic air contaminants for which the state board has not specified a threshold exposure level pursuant to Section 39662, the airborne toxic control measure shall be designed, in consideration of the factors specified in subdivision (b) of Section 39665, to reduce emissions to the lowest level achievable through application of best available control technology or a more effective control method, unless the state board or a district board determines, based on an assessment of risk, that an alternative level of emission reduction is adequate or necessary to prevent an endangerment of public health.

Section 39655 provides the criteria for the "appropriate degree of regulation for each substance" and states in relevant part:

> (a) Following adoption of the determinations pursuant to Section 39662, the executive officer of the state board shall, with the participation of the districts, and in consultation with affected sources and the interested public, prepare a report on the need and appropriate degree of regulation for each substance which the state board has determined to be a toxic air contaminant.
>
> (b) The report shall address all of the following issues, to the extent data can reasonably be made available:
>
> (1) The rate and extent of present and anticipated future emissions, the estimated levels of human exposure, and the risks associated with those levels.
>
> (2) The stability, persistence, transformation products, dispersion potential, and other physical and chemical characteristics of the substance when present in the ambient air.
>
> (3) The categories, numbers, and relative contribution of present or anticipated sources of the substance, including mobile, industrial, agricultural, and natural sources.
>
> (4) The availability and technological feasibility of airborne toxic control measures to reduce or eliminate emissions, the anticipated effect of airborne toxic control measures on levels of exposure, and the degree to which proposed airborne toxic control measures are compatible with, or applicable to, recent technological improvements or other actions which emitting sources have implemented or taken in the recent past to reduce emissions.
>
> (5) The approximate cost of each airborne toxic control measure, the magnitude of risks posed by the substances as reflected by the amount of emissions from the source or

> category of sources, and the reduction in risk which can be attributed to each airborne toxic control measure.
>
> (6) The availability, suitability, and relative efficacy of substitute compounds of a less hazardous nature.
>
> (7) The potential adverse health, safety, or environmental impacts that may occur as a result of implementation of an airborne toxic control measure.
>
> (8) The basis for the finding required by paragraph (3) of subdivision (b) of Section 39658, if applicable.

Of note in Section 39665, the regulation is directed at the substance, not the industry, and must be based upon the numbers and relative contributions from all sources. Id at (a) and (b)(3). From these statutory directions one must more carefully consider the 550 pounds of California statewide hexavalent chromium emissions, especially when attempting to compare them to the new information derived from revised Table VI.1 that show actual hexavalent chromium emissions from chromium plating facilities are limited to 0.19 pound per year.

Section 39660 [Health effects; Submission to state board], provides an additional mechanism by which to determine whether the toxic air contaminant should be considered for an ATCM per Sections 39666(b) or 39666(c) by coordination with the Office of Environmental Health Hazard Assessment (OEHHA).[2] It states in relevant part:

> (a) Upon the request of the state board, the office, in consultation with and with the participation of the state board, shall evaluate the health effects of and prepare recommendations regarding substances, other than pesticides in their pesticidal use, which may be or are emitted into the ambient air of California and that may be determined to be toxic air contaminants.
>
> (b) In conducting this evaluation, the office shall consider all available scientific data, including, but not limited to, relevant data provided by the state board, the State Department of Health Services, the Occupational Safety and Health Division of the Department of Industrial Relations, the Department of Pesticide Regulation, international and federal health agencies, private industry, academic researchers, and public health and environmental organizations. The evaluation shall be performed using current principles, practices, and methods used by public health professionals who are experienced practitioners in the fields of epidemiology, human health effects assessment, risk assessment, and toxicity.

[2] OEHHA mission is to be California's leading scientific organization for evaluating risks to human and ecological health. OEHHA's goals as a governmental agency include: (1) Improving the quality of the public's health and the environment; (2) Advancing the science for the evaluation of risks posed to the public health and environment, and (3) Providing risk assessment leadership for the State of California.

(c)(1) The evaluation shall assess the availability and quality of data on health effects, including potency, mode of action, and other relevant biological factors, of the substance, and shall, to the extent that information is available, assess all of the following:

(A) Exposure patterns among infants and children that are likely to result in disproportionately high exposure to ambient air pollutants in comparison to the general population.

(B) Special susceptibility of infants and children to ambient air pollutants in comparison to the general population.

(C) The effects on infants and children of exposure to toxic air contaminants and other substances that have a common mechanism of toxicity.

(D) The interaction of multiple air pollutants on infants and children, including the interaction between criteria air pollutants and toxic air contaminants.

(2) The evaluation shall also contain an estimate of the levels of exposure that may cause or contribute to adverse health effects. If it can be established that a threshold of adverse health effects exists, the estimate shall include both of the following factors:

(A) The exposure level below which no adverse health effects are anticipated.

(B) An ample margin of safety that accounts for the variable effects that heterogeneous human populations exposed to the substance under evaluation may experience, the uncertainties associated with the applicability of the data to human beings, and the completeness and quality of the information available on potential human exposure to the substance. In cases in which there is no threshold of significant adverse health effects, the office shall determine the range of risk to humans resulting from current or anticipated exposure to the substance.

(3) The scientific basis or scientific portion of the method used by the office to assess the factors set forth in this subdivision shall be reviewed in a manner consistent with this chapter by the Scientific Review Panel on Toxic Air Contaminants established pursuant to Article 5 (commencing with Section 39670). Any person may submit any information for consideration by the panel, which may receive oral testimony.

(d) The office shall submit its written evaluation and recommendations to the state board within 90 days after receiving the request of the state board pursuant to subdivision (a). … .

Based upon the Record, it does not appear OEHHA was consulted on any specific issues relevant to this Record, nor were other hexavalent chromium emission and risk values previously determined by OEHHA factored into any evaluation in the Record.

A determination on substances is also a consideration of Section 39660 and CARB has a webpage describing information on certain substances as follows:

> [CARB] has found there to be a threshold exposure level below which no significant adverse health effects are anticipated from exposure to the identified substance, that level is specified as the threshold determination. If [CARB] has found there to be no threshold exposure level below which no significant adverse health effects are anticipated from exposure to the identified substance, a determination of "no threshold" is specified. If [CARB] has found that there is not sufficient available scientific evidence to support the identification of a threshold exposure level, the "Threshold" column specifies "None identified."
>
> https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants
>
> (Emphasis added).

CARB has identified 21 substances, including hexavalent chromium, at the referenced website above. None of these 21 substances is designated as having "no threshold," meaning that a "zero" threshold for exposure has not been established for these substances. In other words, none of these chemicals would be unsafe at any value.

Instead, "no determination" on chemical carcinogenicity has yet been identified, meaning that CARB has no conclusive information to establish a zero or higher threshold at this time. While this categorical distinction might appear subtle, it is relevant to the Proposed Amendments that have concluded that a ban (i.e., zero exposure) is the only solution for hexavalent chromium from chrome plating facilities only. Such a ban makes little sense because a "no threshold" standard has not been established by CARB.

No other industry is banned by the Proposed Amendments. All other existing hexavalent chromium sources wherever located will continue to be regulated in the same manner.

More appropriately, and consistent with the ongoing statutory approach allowed by CARB and followed by the local air districts, when considering a "no determination" threshold for any chemical, risk evaluation, an area clearly occupied by OEHHA, should be considered for all hexavalent chromium uses, including chrome plating facilities.

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Health & Safety Code Section 44300-44394) ("Hot Spots") provides an additional mechanism for CARB to coordinate with OEHHA. Under Hot Spots, OEHHA has prepared, as part of its Technical Support Document for Cancer Potency Factors, an "Appendix A: Hot Spots Unit Risk and Cancer Potency Values, updated April 2023) ("OEHHA Update")." The unit risk as set forth in the ISOR of 1.5 x 10-1 (micrograms/m3)-1 is also listed in the OEHHA Update. See ISOR, Table ES.1 at page 2. It is not a zero value; instead, it is a number by which risk can be assessed.

Hot Spots also evaluates what is ultimately determined by the local air agency to be a "significant health risk." In the instance of one agency, as an example, a significant health risk is based on the Maximum Individual Cancer Risk ("MICR") exceeding ten excess cancer cases per one million assuming a 70-year continuous exposure.[3] See https://avaqmd.ca.gov/files/e6073cf25/Air+Toxics+Public+Notification+Guidelines.pdf at page

[3] Such a value is consistent with California's "Proposition 65" (Health & Safety Code Sections 25249.5 et seq.), for which OEHHA is also involved. Under that law, an acceptable "no significant risk" exposure for hexavalent chromium is 0.001 micrograms per day. See Title 27 CCR Section 25705(b)(1). It is a number greater than zero and is based directly on proximity.

3. See also, https://www.mdaqmd.ca.gov/home/showpublisheddocument/584/636305695929370000 (significant health risk is a MICR of 100 excess cancer cases per million).

Of especial import, because of the many chrome plating facilities located in the South Coast Air Quality District (SCAQMD), is SCAQMD's Rule 1402 that applies to existing stationary sources of toxic air contaminants, including hexavalent chromium. Under that Rule 1402, a "significant health risk" is described for a MICR of 100 excess cancer cases per million. Id at (c)(19). Other threshold values are also applicable, including a MICR of 25 for an action risk level ((c)(2)) that facilities must attempt to achieve, and a MICR of 10 for a notification risk level ((c)(12)) that triggers the preparation of a report under Hot Spots.[4]

Thus, when considering the statutes as implemented, there is nothing mandating a ban on any substances or industry if it can comply with the relevant risk standards set forth in existing law. Based upon the Proposed Amendments if approved, CARB is selectively banning a single industry while potentially allowing all other industries and uses of hexavalent chromium wherever located that may have higher risk and be more harmful. Any action to ban an industry without effective consideration of these standards appears arbitrary and, further, is not supported by actual emissions information as set forth in revised Table VI.1. Something quite notable in its omission from the Record is the lack of risk evaluation prepared based on the actual emission information at each source. That deficiency will be discussed further herein, infra.

The SRIA Evaluation Must Be Altered and Is Presently Irreconcilable

The SRIA document evaluates the costs associated with the adoption of the Proposed Amendments as originally prepared in the Notice. The SN provides some update to the costs within its text. See SN, generally at Attachment 2. The SN does not re-evaluate the costs by considering actual emissions being reduced to 0.19 pounds per year as provided in revised Table VI.1. See SRIA, Table 2.1, section 2.1 at pages-22-23.

The SRIA was originally prepared by calculating the removal of all potential (not actual) hexavalent chromium emissions from chrome plating facilities over a twenty-year period assuming an artificial and worst-case default rate established over 16 years ago (2007). These calculations, which apply two hypothetical and unrealistic variables, found a reduction of 132 pounds of hexavalent chromium derived from unrealistic assumptions found in the ISOR. See SRIA, pages 1 and 23, Table 2.3. These values appear to be derived from Table VI.1 (at column 2), the column associated with 2007 ATCM limits.[5]

The SRIA improperly evaluated hypothetical unrealistic information that has never actually existed in practice, applying pure assumptions, not actual, factually determined use and

[4] In addition to the standard set forth in Proposition 65 and within Hot Spots, OEHHA has incorporated risk values for inhaled hexavalent chromium as part of its review of hexavalent chromium in drinking water. See, *Public Health Goals for Chemical in Drinking Water, Hexavalent Chromium, July 2011*.

[5] Notably, this Column 2 dramatically conflates the actual emissions by taking higher hypothetical default 2007 ATCM limits, then multiplying this artificially high number with potential (not actual) throughput. For comparison, Column 3 applies one actual number (real 2019 throughput) and Column 4 applies real data, i.e., actual 2019 throughput and actual 2019 emissions.

emissions. With this sleight of hand, the otherwise significant revisions for Table VI.1 as a whole might be ignored.

The revised Table VI.1, Column 2 finds little change in the hypothetical assumptions (a 0.01-pound total reduction, reducing the final amount of emissions over twenty years by 0.08 pounds from 132.37 pounds to 132.29 pounds). However, the change to actual emissions is dramatic. For column 4, when calculated as provided in the SRIA, the actual hexavalent chromium emissions over twenty years would result in only a 3.1 pound reduction over these same twenty years. See Attachment 1 (SRIA Table 2.3 (revised) for column 3 and column 4 emissions reduced).[6]

The reason that hypothetical numbers cannot be used (and especially not multiplied together) in the SRIA evaluation becomes quite apparent when comparing a *hypothetical* 132.3-pound reduction versus an *actual* 3.1-pound reduction. The scale of difference between 132.3 and 3.1, is a factor of 42.68 times.[7]

The overall SRIA evaluation of emissions is troubling when looking back to the mandate of Health & Safety Code Section 39665(b), which directs the information to consider to be based upon (1) the rate of present emissions (not hypothetical emissions), and (5) the approximate cost of the [Proposed Amendments] as reflected by the amount of emissions (not hypothetical emissions) from the category of sources. Id at (b)(1) and (b)(5). With the introduction to actual emissions reported in the revised Table VI.1, this error in the record should be corrected.

The cost-effectiveness of the Proposed Amendments is part of the evaluation of the SRIA. When applying 132.1 pounds to the total assumed cost of $585,919,503,[8] the cost savings is valued at $4,426,377 per hexavalent chromium pound reduced. See SRIA, Table 6.7. While this numeric value appears high at first blush, it pales to the higher costs per pound once considering actual throughput and actual emissions of 3.1 pounds over twenty years using the data from revised Table VI.1. As applied with the same SRIA formula to column 4 data, the cost-effectiveness increases to $189,006,291 per hexavalent chromium pound reduced![9]

The SRIA fails to evaluate the costs and benefits by reflecting on the inherent exposure caused by the existing baseline of hexavalent chromium within California, i.e., 550 pounds of annual emissions. Moreover, the costs and benefits do not reflect on the existence of ambient hexavalent chromium throughout the state.

The SRIA imposes a pre-ordained benefit resulting from the removal of potential emissions that never existed. It couples that inflation with a failure to observe pre-existing

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[6] Column 3, which is inflated by one variable (using the 2007 ATCM default emission rate), would still find total hexavalent chromium emissions saved over twenty years reduced to 35.12 pounds.

[7] Another way to consider this information is by observing that permitted use vastly exceeds actual use, and that 2007 ATCM regulatory limits are vastly higher than actual emission results 16 years later based on advances in control technology and imposition of more stringent limits at the local (District) level.

[8] This figure assumes CARB's cost estimates were correct, but they are more likely substantially under-estimated.

[9] $585,919,503 / 3.1 pounds.

conditions that already expose the average California residents to some amount of hexavalent chromium exceeding the one in one million risk threshold. See General Health Impact, supra.

General Health Impact of Hexavalent Chromium in California

According to EPA's Integrated Risk Information System ("IRIS"), the average mean rate of hexavalent chromium present in the ambient air is 0.037 nanograms per cubic meter, with a maximum of 0.5 nanograms per cubic meter. See EPA, IRIS, Toxicological Review of Hexavalent Chromium, June 2022, Table 1-2 at page 1-9. These described values exceed the EPA Regional Screening Levels for hexavalent chromium in residential air, which provides a one in one million excess cancer risk of 1.2 x 10-5 micrograms per cubic meter (i.e., 0.012 nanograms per cubic meter).[10] See https://semspub.epa.gov/work/HQ/403640.pdf at page 2 of 10.

The benefits of a reduction of 0.19 pounds per year hexavalent chromium should be compared against 550 pounds throughout the state. If the average mean rate of hexavalent chromium in the environment is used, then the reduction is negligible (a reduction of 0.00035 from an average mean of 0.037, or 0.0000128 nanograms per cubic meter). While such a comparison may not reflect real-world conditions, it does demonstrate the minimal overall health impact the removal of 0.19 pounds of actual hexavalent chromium emission would cause to the state as a whole.

SB 535 requires the California Environmental Protection Agency (CalEPA) to identify disadvantaged communities for investment opportunities based on geographic, socioeconomic, public health, and environmental hazard criteria. To implement this statute, the CalEnviroScreen 4.0 tool identifies disadvantaged communities as those that receive scores of 75 percent to 100 percent. Unlike AB 617, the statute does not require further action against any facility located in its boundaries.[11] Only AB 617 should be considered for any evaluation in the Record since only it requires local air districts and the state Air Resources Board to reduce air pollution in these most impacted communities.[12]

CEQA

CEQA requires that CARB have prepared a document to determine whether a project is a discretionary action. See generally, Public Resources Code Sections 21000 et seq.; Title 14 CCR Sections 15000 et seq (the "CEQA Guidelines"). The statute and the CEQA Guidelines provide a framework for agencies to tier from a "program" EIR prepared for a program, plan, policy, or ordinance (PRC Sections 21093, 21094; CEQA Guidelines Sections 15168, 15152). The program EIR will cover "general matters and environmental effects" for the overarching

[10] A simple linear evaluation of the average mean amount of ambient hexavalent chromium in the air to the one in one million risk level produces the following 0.37 / 0.12 = 3 excess cancer cases per million for hexavalent chromium in the ambient air. As discussed in the CEQA section in this letter, supra, this ambient level (and the cancer risk) will increase should the Proposed Amendments be approved.

[11] The removal of chrome plating facilities within those communities represents the opposite of an investment into the community since it takes high-paying jobs away from the area.

[12] Of 47 MFACA members evaluated, only 18 of 47 (38%) are located in an AB 617 area.

program, plan, policy, or ordinance, and the agency will prepare "narrower or site-specific [EIRs] which incorporate by reference the discussion" in the program EIR (PRC Section 21068.5). The document may also take the form of an Environmental Assessment ("EA"), as it did in this Record.

The data reported in revised Table VI.1. identifies the latest compiled information of actual annual emissions of hexavalent chromium from chrome plating facilities equaling 0.19 pounds, which when converted to grams (453.6 grams per pound) amounts to 86.2 grams for the entire state. As discussed herein, infra, the total universe of hexavalent chromium emissions in California is 550 pounds annually (i.e., 249,480 grams).

The EA describes the increase of transportation resulting from the ban of hexavalent chromium use by chrome plating facilities.[13] There is a general discussion about diesel particulate material ("DPM") emissions and a conclusion that this impact is significant and cannot be mitigated for construction purposes. CITE

It is well known and recognized that DPM, along with brake dust and tire wear from trucks used in intrastate and interstate commerce all contribute hexavalent chromium into the California environment. A prior document produced for CARB staff for consideration in these Proposed Amendments identified the amount of hexavalent chromium emissions that would be attributed to a single roundtrip in a diesel-equipped truck (at 7.5 miles per gallon) to the nearest out-of-state location (from Los Angeles), Mojave Valley, AZ (260 total miles one way).[14] That total is 3.14 grams of hexavalent chromium emitted for the one roundtrip. While a single trip is not consequential, many of the same roundtrips trips (only about 28 or more) would result in hexavalent chromium emissions ***increasing*** in the state as a result of the proposed action! For purposes of this simplified assessment, known sources of DPM criteria for toxic air contaminants were identified from public agency records at the SCAQMD.

The following calculation provides the number of miles necessary for the hexavalent chromium emissions annually from trucking mobile sources only to exceed the actual amount emitted by all chrome plating facilities in the state:

86,200 mg * 0.006048 mg hexavalent chromium /mile[15] = 14,253 miles

If just one excess trip is made daily due to the Proposed Amendments, the amount of annual hexavalent chromium emissions increases in California as follows:

(3,140 mg/trip x 365 days) – 86,200 mg (all chrome plating activities) =
1,146,100 mg – 86,200 mg = 1,059,900 mg / 1,000 mg/g / 453.6 g/lb
= 2.337 pounds increase of hexavalent chromium in California

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[13] The EA suggests that there is an as yet undetermined amount of transportation occurring presently as a result of hexavalent chromium plating activities. EA at page 19. While there may be a minimal amount, the principal reason for the concentration of these chrome plating facilities in California is the close distance to their customers in various manufacturing industries.

[14] Attachment 3 - Increased Hexavalent Chromium Emissions from Mobile Sources. The information is based upon DPM only, not brake and tire wear. Supporting agency weblinks are found within Attachment 3.

[15] See Attachment 3.

The number of miles identified as needing to occur (14,253 miles) is dramatically lower than what would otherwise transpire with the loss of hexavalent chromium plated parts in California, which, as the CEQA document acknowledges, represents an issue that will increase transportation. EA at page 10.[16] The increase in mileage will also result in *increases* statewide of emissions for many other toxic air contaminants including, benzene, formaldehyde, arsenic, cadmium and nickel, among others. None of the increases of these toxic air contaminants nor their cumulative detriment to the state was considered in the EA.

The EA is based entirely is upon the following assumption: "the Proposed Amendments are meant to reduce toxic air emissions associated with hexavalent chromium." EA at page102. If the newly described actual emissions of 0.19 pounds per year are equitably compared with the increases in transportation use (and their concurrent and substantial increase in hexavalent chromium emissions) that will directly flow from the Proposed Amendments, then the EA evaluation is wrong at its core.

The CEQA document does not analyze the direct increase of hexavalent chromium emissions across the state. It merely notes air quality impacts for construction, but not for transport. For Air Quality, the EA concludes: "Therefore, the Proposed Amendments would result in a cumulatively beneficial contribution to reducing air toxic emissions during operations." EA at page 90.

The EA fails to discuss the ambient hexavalent chromium conditions throughout the state and the relative health exposure resulting from these ambient conditions. See discussion in this letter, infra. It does not account for the increase in hexavalent chromium emissions resulting from the increased transportation that will necessarily result from the increased truck and rail traffic. It also does not account for increases in fuel, brake and tire emissions at California's ports that may result from the increased importation of hexavalent chromium parts.[17]

The cumulative detrimental contribution of hexavalent chromium that will result, if the Proposed Amendments are adopted, could be avoided by an alternative that was not considered in the EA. That alternative would allow the continued operation of chrome plating facilities in California, which would provide a cumulatively beneficial contribution to statewide hexavalent chromium emissions by reducing the amount of truck and rail traffic. The failure to properly consider such a reasonable and obvious alternative is a further defect in the EA.

Proximity

The revised emissions values found in revised Table VI.1 go directly to another point of concern; specifically, the issue of proximity of these emissions. If assumptions on exposure are

[16] The EA also references the use of trains trips. For simplicity purposes, the comment herein has focused on truck trips; however, train trips will also result in the additional emission of hexavalent chromium, which was not evaluated in the EA.

[17] As the Proposed Amendments note, 91% of the hexavalent chromium emissions in the state are from mobile sources that would include interstate transportation, which is outside the state's ability to directly regulate. As discussed herein, emissions from these same and (significantly greater) hexavalent chromium mobile sources will increase further with the ban of chrome plating facilities.

based upon the potential emissions as opposed to the actual emissions, then the assumptions on risk are erroneous as they dramatically overstate the actual risk.

Taken one step further, the ISOR takes pains to identify the percentage of facilities that are close (in staff's view) to schools and sensitive receptors. There is much said in the Record about the percentages of chrome plating facilities located near these receptors, as well as being generally in locations identified per AB 617.[18] The resultant conclusion, and the Proposed Amendments proposal is to ban all chrome plating facilities.

What is lost in this rush to a complete ban is both an evaluation of the lower emissions of revised Table VI.1 at all locations, and equally important, a further consideration of the chrome plating facilities that do not trigger any of the sensitivities noted by CARB staff. The Record does not conclude that 100% of the facilities are exposing anyone, let alone a sensitive receptor or disadvantaged community. The idea of an absolute ban that makes no consideration for facilities that, by the Proposed Amendment's own evaluation, are not causing any risk to the public, seems arbitrary and beyond the basis of substantial evidence.

Actual Risk and the Non-Existent Facility

The ISOR identified a serious concern reflecting the proximity of a major hexavalent emission source to a sensitive receptor. Specifically, the ISOR states:

> Figure V.2., below, summarizes the progressive reductions of potential individual resident cancer risks from the 2019 baseline to year 2039, under the Proposed Amendments. The estimated cancer risks associated with emissions of hexavalent chromium are calculated at near-source receptors downwind from the edge of facility building. In 2019, the potential cancer risk from large functional platers is estimated at about 213 chances per million… . ISOR at page 174.

CARB staff reported to the MFACA in December 2022 that the emission inventory in Appendix B was incorrect and that it would be amended. The amended emission inventory was posted along with the proposed rule modifications that are subject to the SN. See SN, Attachment 2, Table 1, pages 3-22. At the time of the January 2023 hearing, no one, including the Board, was able to effectively evaluate actual emissions because there was no correct emissions inventory.

A further evaluation of 42 MFACA member chrome plating facilities, including the largest by amp-hours, was made based on known proximities to the nearest sensitive receptors at each of these locations.[19] Once the math is applied to these facilities, none of them are remotely close to the 213 in one million cancer risk asserted in the ISOR, even assuming the default 2007 ATCM emission rate. Despite having an amended emission inventory, the Record has not been corrected to reflect the changes that would result from that information including the dramatic decrease in actual risk.

As stated, 42 facilities (37% of the total universe of 113 facilities at issue) were evaluated by considering the total amp-hours used, the distance to a receptor, the default 2007 ATCM rate

[18] See footnote 11, supra.
[19] See Attachment 4 - Facility-Specific Risks and Proximity for Actual Hexavalent Chromium Usage

and the actual or assumed actual tested emission rate at the facility. When applying the 2007 ATCM default emission rate, the worst-case exposure resulted in a 155 in a million exposure, a value significantly less than 213, but also purely a hypothetical result. However, once actual emissions were determined from source test results, the worst-case exposure level for 39 of 42 facilities was less than one in one million.[20] The three remaining facilities would have results of 1.24, 1.93 and 4.54 excess risks per one million at the nearest receptor, respectively, all below the generally accepted triggering value of ten excess risks per one million.[21] Thus, all evaluated facilities have risk values that comport with California's Air Toxics Hot Spots requirements and SCAQMD standards for toxic air contaminants.

The SN includes the corrected emission inventory but fails to correct the Record on this egregious error. This fact is a critical one for the public and, due to the enormous size of the risk, it has become a primary focal point that not only affects the public but has been broadcast in the media. Because the Record lacks any of the corrected information within it, decisionmakers are affected by the erroneous information and are without the substantial evidence needed to make an unbiased and impartial decision.

Alternatives for Proposed Amendments

As stated in ISOR at page 222:

> Government Code section 11346.2, subdivision (b)(4) requires CARB to consider and evaluate reasonable alternatives to the proposed regulatory action and provide reasons for rejecting those alternatives. This section discusses alternatives evaluated and provides reasons why these alternatives were not included in the proposal. As explained below, no alternative proposed was found to be less burdensome and equally effective in achieving the purposes of the regulation in a manner than ensures full compliance with the authorizing law. (Emphasis added).

As discussed previously, the purpose of the regulation is "to reduce the emissions to the lowest level achievable through application of available control technology **or** a more effective control method, **unless** the state board or a district board determines, based on an assessment of risk, that an alternative level of emission reduction is adequate or necessary to prevent an endangerment of public health." Emphasis added. The latter portion of the section appears to be the one CARB is seeking to apply since the Record states the zero threshold is necessary due to the endangerment of public health. This conclusion flies in the face of the information provided in revised Table VI.1 concerning the total of actual hexavalent emissions being only 0.19 pounds per year and the known (but otherwise unanalyzed in the Record) lessened risk associated with

[20] Cf. the EPA IRIS ambient air excess cancer risk from hexavalent chromium of three in one million discussed, supra.

[21] Notably, the facility with the highest amount of amp-hrs and the highest assumed risk, dropped to a risk of 1.24 in one million once actual information was applied. The actual source test data found the tested facility emission rate to be 0.000012 mg/amp-hr (and lower). **Thus, a 213 hypothetical excess cancer risk is now a 1.24 actual excess cancer risk, a value which is below existing ambient hexavalent chromium levels!**

this lower amount. The public endangerment finding requires and must be based upon an assessment of risk, particularly if the toxic air contaminant is designated as "no determination versus "no threshold". That risk assessment appears in this letter and finds that public endangerment does not exist, and that all the facilities would meet existing requirements for risk in their respective local air districts. The SN does not contain any form of updated risk assessment necessary to support the public endangerment finding.

If CARB has not updated its risk assessment, the statute provides an alternative solution. The purpose of the regulation can be met by either the use of available control technology **or** a more effective control method. Because this statutory choice is discretionary, CARB is not mandated to institute a ban and will still be able to achieve the purposes of the regulation in a manner than ensures full compliance with the authorizing law. CARB may decide to apply available control technology, especially in light of the new emission inventory information and the significantly reduced actual emissions reported in Table VI.1. Thus, the alternatives can be viewed both as less burdensome and equally effective with the purposes of the authorizing law.

Government Code Section 11346.2(b)(4) provides the requirements for alternatives:

> (4)(A) A description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. Reasonable alternatives to be considered include, but are not limited to, alternatives that are proposed as less burdensome and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the authorizing statute or other law being implemented or made specific by the proposed regulation. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific actions or procedures, the imposition of performance standards shall be considered as an alternative.
> (B) A description of reasonable alternatives to the regulation that would lessen any adverse impact on small business and the agency's reasons for rejecting those alternatives.
> (C) Notwithstanding subparagraph (A) or (B), an agency is not required to artificially construct alternatives or describe unreasonable alternatives.

The ISOR takes pains to identify multiple times concerns about proximity, sensitive receptors and disadvantaged communities. Through these continuous assertions, it *indirectly* acknowledges: (1) there is a distance at which exposure is effectively "zero", and (2) that some percentage less than 100% is not near a sensitive receptor or in a disadvantaged community. See ISOR, Figure V.1 at page 174 [zero at 500 meters]; and page 3 [9% within 300 meters of schools (i.e., 91% are not) and 14% within AB 617 communities (i.e., 86% are not)].

An alternative based upon proximity should have been automatic, and cannot be considered an artificially constructed alternative, or otherwise unreasonable. Such a reasonable alternative would have lessened any adverse impact on small businesses. The evaluation could have identified a sufficient distance, appropriate technology and allowed for no future prohibition on new facilities if the requirements were met.

Instead, the ISOR discussed three alternatives: (1) Short Phase Out and (2) No Phase Out and (3) Extended Phase Out. See ISOR, Section X (page 222 et al). These alternatives were based upon the original assumptions found in the ISOR and not based upon the updated emission inventory and lower actual emissions as found in revised Table VI.1. This new information requires these alternatives be re-evaluated; however, no discussion on revised alternatives exists in the SN, and the Record presently contains the original analysis in the ISOR only, which lacks the new information. As discussed above, the reduced actual risk overall, coupled with the existence of facilities that are not near sensitive receptors or in disadvantaged communities, strongly suggests that existing alternatives must be re-evaluated. Because the emissions values have dramatically decreased under Table VI.1., the subsequent evaluation of risk derived from that information finds that existing risk based upon proximity is likely to be acceptable under present statutory guidelines. Nevertheless, an alternative evaluation should be reconsidered, particularly for the No Phase Out alternative, in light of additional control technologies that could further reduce risk including the zero-emission alternative of Permanent Total Enclosures.

An additional alternative based solely on risk and proximity should also be considered. Without this new emissions inventory, such a consideration would not have been possible; however, given the new information and the apparent need to consider risk, rather than a zero threshold, based upon a proper reading of the statutes, the failure to include and consider such an alternative represents an abuse of discretion.[22]

Errors in the New Emissions Inventory

The SN provides an amended emissions inventory (ISOR, Appendix B, revised Table 1) as well as a summary of that information at Table VI.1. Much of the issues set forth in this letter consider the significant downward revision of actual emissions from 2.2 pounds per year to 0.19 pounds per year. A further review of the detailed data, however, finds that the new information is also incorrect.

We note the amended emissions inventory includes at least one calculation where a value appears to have been incorrectly included as 0.0000588 as opposed to 0.000588. Cf. SN, Attachment 2, Table 1 at pages 17-22, Average Source Tested Emission Rate (Facility Type - Hard) at pages 17-22 versus ISOR, Appendix B, Table 2 page 15, Test Emission Rate, (Hard with Add-on). That single error alone has significance. There are other figures as well as arbitrary default assumptions that should not have been applied.

The information, if revised to the original ISOR number, alters the actual emissions total to a higher value, coming closer to one pound. The value remains more than two times lower than the ISOR reported amount, but five times higher than the SN reported amount in Table VI.1 for actual emissions. This additional change in the data confounds any understanding of what the information should really mean. This issue is exacerbated by the inability of the MFACA to obtain source test and other public data that would provide meaningful evaluation of actual

[22] One must carefully consider that the Proposed Amendments are solely for chrome plating facilities and do not affect mobile sources (which will increase if the Proposed Amendments are approved), nor do they alter existing stationary sources outside the universe of chrome plating facilities that may have much higher risk due to their emissions and proximity.

emissions. Taken in light of the issues mentioned previously in this letter, it strongly suggests that CARB start at the beginning to re-evaluate the Proposed Amendments for chrome plating facilities. The Record is hopelessly deficient and defective. No cogent decision could be made upon it and any attempt to do so would be the basis of a legal challenge.

PFOS Improperly Considered

The Record improperly considers PFOS. The Record cites to ancillary benefits being the supposed entire removal of PFOS from chrome plating facilities once hexavalent chromium is banned. It is noted in both CEQA and the SRIA documents.

The costs and consequences of the removal of PFOS are under-reported and lack a level of understanding concerning the existence of PFOS throughout a chrome plating facility. As known by users, PFOS remains in operational equipment well beyond the equipment exclusively used with hexavalent chromium, which is contrary to the comments suggested in the Record. With that affect, there is a need to remove much more equipment than was considered in the CEQA and SRIA analysis if the intended outcome is to remove PFOS entirely. The costs of disposal for the equipment are based upon their contamination with hexavalent chromium, not PFOS, and the additional costs associated with the disposal of PFOS-contaminated equipment have not been analyzed. Even the removal of tanks and pipes that contain PFOS materials is known to not result in a total removal of PFOS, leaving legacy issues. Thus, these environmental and financial impacts have not been adequately or completely considered in the Record.

Conclusion

Based upon the foregoing presentation, new information published as part of the Supplemental Notice identified problems with the Proposed Amendments as the Record currently exists. New data showing dramatically lower actual emissions has been noted, but the analysis in the Record has not been updated. Moreover, the 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. The accuracy of the Record currently is in question, particularly since there appears to be errors in the emissions inventory.

We believe the issues as outlined in this letter fundamentally affect the legality of the Proposed Amendments as they presently exist. The MFACA believe it appropriate to withdraw the Proposed Amendments at this time from the scheduled hearing as well as meet with the MFACA commenting parties to discuss pathways to move this issue forward and to provide available data. We believe that analysis on these Proposed Amendments must be re-done based on accurate emissions data so that the regulated community and other stakeholders are provided the most accurate information possible to protect human health and the environment in California.

* * * *

We appreciate the opportunity to prepare these comments concerning this important regulatory measure having such significant impacts upon the State of California. We look forward to your careful review and consideration of the many issues we have brought to your attention. We ask for the opportunity to discuss this matter with CARB, its staff and legal counsel before final consideration of the Proposed Amendments to ban hexavalent chrome

plating facilities in California. Please feel free to contact the undersigned should you wish to discuss this matter further.

Sincerely,

CHARLES H. POMEROY
StilesPomeroy LLP

cc: Ellen M. Peter, Esq., Chief Counsel, CARB (via email: Ellen.Peter@arb.ca.gov)

Attachments
(1) SRIA Table 2.3 Corrected to Actual Emissions
(2) Increased Hexavalent Chromium Emissions from Mobile Sources
(3) Data Requests, June 2021 to April 2023.
(4) Facility-Specific Risks and Proximity for Actual Hexavalent Chromium Usage (42 Facilities)

Attachment 1
SRIA Table 2.3 Corrected to Actual Emissions

Table 2.3 Estimated Annual Hexavalent Chromium Emission Reductions Resulting from the Proposed Amendments from 2024 to 2043 (column 3, Revised Table VI.1)[1]

Year	Hexavalent Chromium from Decorative Chrome Plating Operations (lbs/yr)	Hexavalent Chromium from Hard Chrome Plating Operations (lbs/yr)	Hexavalent Chromium from Chromic Acid Anodizing Operations (lbs/yr)
2024	0.0	0.0	0.0
2025	0.21	1.24	.01
2026	0.21	1.24	.01
2027	0.21	1.24	.01
2028 to 2037	0.21	1.24	.01
2038	0.21	2.47	.02
2039 to 2042	0.21	2.47	.02
2043	0.21	2.47	.02
Total	**3.99**	**30.88**	**0.25**

Table 2.3 Estimated Annual Hexavalent Chromium Emission Reductions Resulting from the Proposed Amendments from 2024 to 2043 (column 4, Revised Table VI.1)[2]

Year	Hexavalent Chromium from Decorative Chrome Plating Operations (lbs/yr)	Hexavalent Chromium from Hard Chrome Plating Operations (lbs/yr)	Hexavalent Chromium from Chromic Acid Anodizing Operations (lbs/yr)
2024	0.0	0.0	0.0
2025	0.093	0.048	0.005
2026	0.093	0.048	0.005
2027	0.093	0.048	0.005
2028 to 2037	0.093	0.048	0.005
2038	0.093	0.096	0.01
2039 to 2042	0.093	0.096	0.01
2043	0.093	0.096	0.01
Total	**1.77**	**1.20**	**0.13**

[1] Actual usage multiplied by assumed 2007 ATCM default Amp-hr emission limits.
[2] Actual usage multiplied by actual Amp-hr emission limits.

Attachment 2
Increased Hexavalent Chromium Emissions from Mobile Sources[1]

Los Angeles, CA to Mojave Valley, AZ		260	miles	(each direction)			
Fuel economy Heavy duty Diesel Trucks		7.5	mpg				
http://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/combustion-emission-factors-2021.pdf							
Toxic Emission Factors from Stationary and Portable Internal Combustion Engines (ICE), Turbines and Micro Turbines							
Diesel / Distillate Oil (lb/1000 gallons)		All Sizes					
Toxic Compound	CAS No.	lbs./1,000 gals	lbs./gal	lbs./mile	mg/mile	mg/trip	mg/roundtrip
Benzene	71432	0.1863	0.0001863	0.00002484	11.26723	2,929.48	5,859
1,3-Butadiene	106990	0.2174	0.0002174	2.89867E-05	13.14813	3,418.51	6,837
Cadmium	7440439	0.0015	0.0000015	0.0000002	0.090718	23.59	47
Formaldehyde	50000	1.7261	0.0017261	0.000230147	104.3928	27,142.12	54,284
Hexavalent chromium	18540299	0.0001	0.0000001	1.33333E-08	0.00605	1.57	**3.14**
Arsenic	7440382	0.0016	0.0000016	2.13333E-07	0.096766	25.16	50
Lead	7439921	0.0083	0.0000083	1.10667E-06	0.501976	130.51	261
Nickel	7440020	0.0039	0.0000039	0.00000052	0.235868	61.33	123
PAHs(polycyclic aromatic hydrocarbons)	1151	0.0559	0.0000559	7.45333E-06	3.380775	879.00	1,758
Diesel exhaust particulate	9901	33.5	0.0335	0.004466667	2026.046	526,771.94	1,053,544
Ammonia	7664417	2.9	0.0029	0.000386667	175.389	45,601.15	91,202
Organic Gases		37.5	0.0375	0.005	2267.962	589,670.08	1,179,340
NOx		469	0.469	0.062533333	28364.64	7,374,807.15	14,749,614
Sox		0.21	0.00021	0.000028	12.70059	3,302.15	6,604
CO		102	0.102	0.0136	6168.856	1,603,902.62	3,207,805
PM		33.5	0.0335	0.004466667	2026.046	526,771.94	1,053,544

[1] Emission metric based upon readily available public data. Assumes estimates for truck use only.

https://www.bts.gov/content/estimated-national-average-vehicle-emissions-rates-vehicle-vehicle-type-using-gasoline-and

Diesel,Heavy Duty Truck 2020	g/mile	mg/mile	mg/trip	mg/roundtrip
Total HC	0.269	269	69,940	139,880
Exhaust CO	2	2000	520,000	1,040,000
Exhaust NOx	4.169	4169	1,083,940	2,167,880
Exhaust PM2.5	0.106	106	27,560	55,120
Brakewear PM2.5	0.009	9	2,340	4,680
Tirewear PM2.5	0.004	4	1,040	2,080

Attachment 3
Data Requests - (Email String)

From: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Sent: Tuesday, April 11, 2023 8:43 AM
To: Brian Ward <brian@aaaplating.com>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: RE: Chrome plating/anodizing facilities.

Hi Brian,

I will look into this this week and get back to you soon.

Eugene Rubin (he/him)
(916) 287-8214

From: Brian Ward <brian@aaaplating.com>
Sent: Monday, April 10, 2023 11:41 AM
To: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: Re: Chrome plating/anodizing facilities.

Eugene-

Do you have the source test data that we spoke of?

-Brian Ward
AAA Plating & Inspection, Inc.

Fw: Chrome plating/anodizing facilities.

From: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Sent: Wednesday, March 15, 2023 10:36 AM
To: Brian Ward <brian@aaaplating.com>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: RE: Chrome plating/anodizing facilities.

HI Brian,

Yes I was able to get some data. Let me look into how best to share it with you.

Best,

Eugene Rubin (he/him)
(916) 287-8214

From: Brian Ward <brian@aaaplating.com>
Sent: Monday, March 13, 2023 2:07 PM
To: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: Re: Chrome plating/anodizing facilities.

Eugene-

Have you been able to get facility source test data from the air districts?

If so, could you share that?

Thank you.

-Brian Ward
AAA Plating & Inspection, Inc.
(310)637-1066 ext. 224

From: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Sent: Thursday, July 1, 2021 8:35 AM
To: Brian Ward <brian@aaaplating.com>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: RE: Chrome plating/anodizing facilities.

Yes source test results are public data that can be requested from the air districts. I have been gathering source test data, but any that can come from MFA directly is helpful as well as it may be easier for a facility to share a single test report.

Fw: Chrome plating/anodizing facilities.

From: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Sent: Thursday, July 1, 2021 8:35 AM
To: Brian Ward <brian@aaaplating.com>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: RE: Chrome plating/anodizing facilities.

Yes source test results are public data that can be requested from the air districts. I have been gathering source test data, but any that can come from MFA directly is helpful as well as it may be easier for a facility to share a single test report.

Eugene Rubin

From: Brian Ward <brian@aaaplating.com>
Sent: Wednesday, June 30, 2021 4:30 PM
To: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: Re: Chrome plating/anodizing facilities.

Eugene-

Can you get emission factors (source test results) from the respective air districts in the same way?

Thank you.

-Brian Ward
AAA Plating & Inspection, Inc.
(310)637-1066 ext. 224

From: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Sent: Thursday, June 17, 2021 7:39 AM
To: Brian Ward <brian@aaaplating.com>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: RE: Chrome plating/anodizing facilities.

Amp-hr data was provide by the local District from data submitted by the facility.

Eugene Rubin

From: Brian Ward <brian@aaaplating.com>
Sent: Wednesday, June 16, 2021 5:06 PM

Fw: Chrome plating/anodizing facilities.

Eugene Rubin

From: Brian Ward <brian@aaaplating.com>
Sent: Wednesday, June 16, 2021 5:06 PM
To: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: Re: Chrome plating/anodizing facilities.

Eugene-

Thank you.

Do you know how the amp-hr data was gathered?

-Brian Ward
AAA Plating & Inspection, Inc.
(310)637-1066 ext. 224

From: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Sent: Wednesday, June 16, 2021 3:32 PM
To: Brian Ward <brian@aaaplating.com>
Cc: Harris, Greg@ARB <greg.harris@arb.ca.gov>
Subject: RE: Chrome plating/anodizing facilities.

Hello Brian,

Sorry for the delay in getting this to you. Attached you will find the facility inventory we are using for our amendments. It includes the data we have on 2019 annual amp-hr usage. This one doesn't include emissions calculations but we use the amp-hr and the ATCM limit (0.0015mg/amphr or 0.01mg/amphr) to calculate the emissions. Give me a call if you want to discuss this further or if you were looking for something different.

Eugene Rubin
916-287-8214

From: Brian Ward <brian@aaaplating.com>
Sent: Wednesday, June 2, 2021 3:05 PM
To: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Subject: Chrome plating/anodizing facilities.

Fw: Chrome plating/anodizing facilities.

Subject: RE: Chrome plating/anodizing facilities.

Hello Brian,

Sorry for the delay in getting this to you. Attached you will find the facility inventory we are using for our amendments. It includes the data we have on 2019 annual amp-hr usage. This one doesn't include emissions calculations but we use the amp-hr and the ATCM limit (0.0015mg/amphr or 0.01mg/amphr) to calculate the emissions. Give me a call if you want to discuss this further or if you were looking for something different.

Eugene Rubin
916-287-8214

From: Brian Ward <brian@aaaplating.com>
Sent: Wednesday, June 2, 2021 3:05 PM
To: Rubin, Eugene@ARB <Eugene.Rubin@arb.ca.gov>
Subject: Chrome plating/anodizing facilities.

Eugene-

It was mentioned that 141 facilities are affected by this rule.

Can we get a list of these facilities so we can reach out to them for data pertaining to this issue?

Thanks.

-Brian Ward
AAA Plating & Inspection, Inc.
(310)637-1066 ext. 224

Reply Forward

Attachment 4
Facility-Specific Risks and Proximity from Actual Hexavalent Chromium Usage

Excess Risks in one million @ different source test emission factors[1]

			Assume		Actual
Facility Type	Meters to Receptor	Amp-hrs.	0.0015	0.000000029	0.000000029
Anodizing	0	104,168	0.21	0.0000040	0.0000040
Anodizing	0	50,460	0.10	0.0000020	0.0000020
Anodizing	0	484,349	0.97	0.0000187	0.0000187
Anodizing	0	117,689	0.24	0.0000046	0.0000046
Anodizing	18	388,833	0.94	0.0000183	0.0000183
Anodizing	62	23,658	0.21	0.0000040	0.0000040
Anodizing	67	74,681	0.24	0.0000046	0.0000046
Anodizing	111	14,425	0.20	0.0000038	0.0000038
Anodizing	139	288,742	0.29	0.0000057	0.0000057
Anodizing	158	655,289	0.40	0.0000077	0.0000077
Anodizing	198	43,683	0.04	0.0000008	0.0000008
Anodizing	455	163,507	0.20	0.0000040	0.0000040

			Assume		Actual
Facility Type	Meters to Receptor	Amp-hrs.	0.0015		0.000188
Decorative	0	982,191	13.10		0.20
Decorative	0	57,395	0.77		0.01
Decorative	10	29,378	1.26		0.02
Decorative	19	233,010	4.75		0.07
Decorative	61	206,929	2.24		0.03
Decorative	71	937,659	5.09		0.08
Decorative	76	250,952	2.21		0.03
Decorative	95	27,248	1.36		0.02
Decorative	148	3,729,115	9.60		0.15
Decorative	167	1,485,252	4.20		0.06
Decorative	172	108,398	1.47		0.02
Decorative	208	8,423	0.20		0.00
Decorative	273	15,391	0.98		0.01
Decorative	311	4,185	0.53		0.01
Decorative	390	639,660	1.75		0.03

[1] Assumes continuous 24-hour per day exposure over seventy years.

Excess Risks in one million @ different source test emission factors[2]

			Assume	Assume	Actual
Facility Type	Meters to Receptor	Amp-hrs.	0.0015	0.000588	0.0000588
Hard	0	57,942,267	115.88	45.43	4.54
Hard	17	1,418,916	2.57	1.01	0.10
Hard	18	6,298,513	10.29	4.03	0.40
Hard	18	5,560,000	9.11	3.57	0.36
Hard	29	10,380,000	15.69	6.15	0.62
Hard	41	116,476,081	155.11	60.80	1.24[3]
Hard	69	78,104,109	49.16	19.27	1.93
Hard	116	10,195,736	4.49	1.76	0.18
Hard	152	12,710,000	4.33	1.70	0.17
Hard	344	3,774,586	0.69	0.27	0.03
Hard	366	4,071,963	0.69	0.27	0.03
Hard	449	203,876	0.21	0.08	0.01
Hard	483	14,752,086	1.36	0.53	0.05

			Assume	Assume	Actual
Facility Type	Meters to Receptor	Amp-hrs.	0.0015	0.000588	0.0000588
Multiple (Hard chrome/Anodizing)	210	107,434,648	25.41	9.96	1.00

[2] Assumes continuous 24-hour per day exposure over seventy years.
[3] Source test data from location reported at 0.000012 mg/amp-hr.