UNITED AIRLINES

December 1, 2006

Clerk of the Board
California Air Resource Board
Stationary Source Division,
1001 I Street,
Sacramento, CA 95814

RE: United Airlines' Comments on ARB's Proposed Amendment to Section 93102: Hexavalent Chromium Airborne Toxic Control Measure for Chrome Plating and Chromic Acid Anodizing Operations – November 2006 Board Draft

Dear Clerk of the Board,

Thank you for allowing United Airlines (United) to participate and submit comments to the Air Resource Board (ARB) on the recent draft 11/30/2006) amendment to Title 17, California Code of Regulations, Section 93102 and the information presented in the Staff Report: Initial Statement of Reasons for Proposed Rulemaking.

United has reviewed the proposed draft regulation entitled:

Staff's Suggested Modifications to the Original Proposal Considered by the Board on September 28, 2006

Hexavalent Chromium Airborne Toxic Control Measure (ATCM) for Chromium Plating and Chromic Acid Anodizing Operations

Comments on the Proposed ATCM - Regulatory Language Changes

United submitted similar comments on a previous version of the draft ATCM, however, since many of the issues discussed in our letter were not acknowledged, discussed with ARB Staff or incorporated into the most recent draft ATCM, United still has concerns about the ARB Board draft dated November 30, 2006.

Section 93102.3(a) Definitions:

For the three facility size definitions at *(31) "Large, hard chromium electroplating facility"; (36) "Medium, hard chromium electroplating facility"; (48) "Small, hard chromium electroplating facility"* it is recommended that the ARB add ***"from all affected tanks"*** at the end of the sentence. This would make clarification that the emission ranges specified are from all tanks not just the one tank, since the definition of facility does not indicate this.

Although the end result of the emission limits will do away with the existing limits presented in Section 93102.4(a), we find no value in keeping Table A or B with classifications such as large, medium and small in terms of controlled emissions. If the Staff Report has found that approximately 4 pounds of hexavalent chromium emissions are emitted per year from 228 sources, how is it that a source can still be classified as >10 lbs/yr controlled for large facilities and the like?

Upon implementation of the amended regulation, and after the effective date has passed, the definitions identified above would no longer be applicable. Does the ARB plan to amend the regulation again at that time? If so, would such an amendment be a public process like this one? Even if future amendments were just administrative in nature (no public participation), should not the ARB's intention or plan be disclosed during this amendment process?

At the definition *(37)(A) Modification*, add an underline to the word "not" in the last sentence of the paragraph to add emphasis to remind the reader that the items listed are exclusionary.

Each of the three statements requiring a site-specific analysis read differently, Table 93102.4 just states that an analysis must be done, but does not direct the owner or operator to perform the analysis. The statement under 93102.4(c)(2) sate the owner or operator shall conduct the analysis. The statement under 93102.4(d)(3) state that each new facility shall conduct the analysis. This is inconsistent, if this requirement must remain in the final adopted version, please rephrase to make them consistent.

Furthermore, if the ARB decides to keep the site-specific analysis requirement in the regulation, United further recommends that the regulation require the LAPCD to perform the analysis not the facilities themselves. This is based on the fact that most LAPCDs have established technical and planning divisions that conduct air dispersion modeling and risk evaluations. Since the LAPCDs already have the appropriate dispersion models, receptor grids, local representative meteorology and source information, such an effort would not only be more cost effective, but would allow a more uniform approach that can be better compared across Districts.

93102.5 Requirements that Apply to Existing, Modified, and new Hexavalent Chromium Plating or Chromic Acid Anodizing Facilities Beginning [Effected Date].

Note that this numbered section is also used for ARB's newly adopted Thermal Spray ATCM. It is suggested that the ARB consider reassignment of a Section number to the Thermal Spray ATCM or skip this number within this proposed regulation.

93102.5(b) Environmental Compliance Training. No later than [Two years after Effective Date] and within every two years thereafter, the owner or operator of a facility, or personnel designated by the owner or operator that are responsible for maintaining environmental compliance, shall complete an Air Resources Board (ARB) Compliance Assistance Training Course.

Although United Airlines previously submitted comments on this section in a letter to the ARB dated August 25, 2006, and November 10, 2006 additional comment is provided as:

This section does not indicate which Compliance Assistance Training Course to take. From our review of the Compliance Assistance Training Course website, it appears that the one-day **Course #290.3 Chrome Plating and Anodizing** would be the appropriate course.

Please verify that this is the intended course that would be required. If so, then United recommends that the course title or number be referenced within the appropriate section(s).

The ARB Compliance Assistance Training website describes Course #290.3, Chrome Plating & Anodizing and indicates the manual used for the training as *Handbook #02-033.* This handbook published by CARB is entitled "*Chrome Plating and Anodizing Operations Self-Inspection Handbook, For Personnel in Chrome Plating and Chromic Acid Anodizing Operations*."

United reviewed the CARB published booklet and it appears to be simplistic providing general information on air pollution, process information, general health effects and chemical safety and hazards, information on the regulation, requirements and pollution control along with inspection and recordkeeping summary.

The emission limits, control equipment requirements and quarterly inspection portion is basically a synopsis of the requirements already identified in the current ATCM (which can be read by anyone for free and not have to pay to attend a course in which the same or similar information will be restated by an instructor).

In addition, the current Handbook references the existing ATCM and not the proposed amendments to the ATCM, does the ARB intend to update the handbook upon promulgation of the final version of the ATCM?, If so, when would the revision be completed?

If an update were intended, would a draft revision of the handbook be available for public comment? This way perhaps the Handbook can be enhanced by introducing actual chrome plater's perspective on related issues.

United also has the Chrome Plating and Anodizing Operations Interactive CD January 2006 Version 1.0b. Although the information presented in the CD is more in depth than the handbook, most of the information is already incorporated into United's in-house training programs. Like the handbook, the regulatory information does not have the proposed regulatory changes or other staff report supporting documentation.

We therefore, would ask that the ATCM have provisions to allow for "in-house" training programs such as ours, subject to verification by CARB or local air pollution control agency that may be tasked with enforcing compliance of this ATCM. Since we have the Handbook and CD we can present some of those materials in addition to our own materials without the added expense of travel, course cost, loss of production and employee pay.

93102.5(b)(4) Nothing in this subsection 93102.5(b) shall absolve an owner or operator from complying with sections 93102 – 93102.16

While this statement is meant as a catch all, it is too broad of a statement to be placed where it is proposed. It states the obvious - that it is the general duty of the facility to comply with the regulation.

Such a phrase implies that if for some reason the training doesn't work out, or persons trained are not available at the facility (e.g. training is cancelled, or persons trained are not available due to illness, vacation) that the facility must still comply with the ATCM.

This means that the facility must then have someone not trained to conduct the required recordkeeping or other compliance related task. Essentially the statement says its okay to have someone not trained to do the required tasks as long as compliance is achieved.

United recommends that 93102.5(b)(4) be deleted from the proposed regulation.

93102.5(c) Housekeeping Requirements. Effective [Six months after Effective Date], housekeeping practices shall be implemented to reduce potential fugitive emissions of hexavalent chromium. At a minimum, the following practices shall be implemented:

93102.5(c)(B). Facilities without automated lines.

1. Each electroplated or anodized part must be handled so that excess chromic acid is not dripped outside the electroplating tank.

Due to the intricate shapes of some parts electroplated at United, upon parts pull and rinse, (and after allowing for excess liquid to drain back in the plating tank) usually by hoist and during transport to the next process, there is potential for residual chromic acid within a crevice or pocket to drip outside of the tank depending on the angle at which the part is placed. Hence, compliance would be very difficult to maintain on a routine basis. According to the way the subsection is written, one drop outside the tank would be a violation of the regulation. Since "excess chromic acid" is not defined in the regulation, it is unclear as to whether excess is relative to "normal" amounts of chromic acid dripping or if it means any chromic acid, or 10 drops of chromic acid. It is believed that this is not the intent of the regulation to control every drop of chromic acid but to emphasize the effort to reduce potential emission of hexavalent chromium. Therefore, United recommends modifying the section to read:

"Each electroplated or anodized part must be handled so as to minimize excess chromic acid spillage outside the electroplating tank."

2. Each facility spraying down parts over the electroplating or anodizing tank(s) to remove excess chromic acid shall have a splash guard installed around the tank to minimize over-spray and to ensure that any hexavalent chromium laden liquid is returned to the electro-plating or anodizing tank.

This subsection does not provide or reference splash guard specifications or how many sides of the tank must have splash guards. Will this be at the discretion of the facility? What percentages of facilities have splash guards and what are their configurations.

Based on the type of parts and workflow and tank configurations at United, implementation of splash guards can be quite an impediment to tank access and to hoist clearance on some of the larger landing gears. For those facilities where splash guards may be impractical, we suggest that the subsection have an added statement, stating that if a splash guard is not feasible, then the owner or operator should rinse each part so as to minimize excess chromic acid spillage outside the electroplating tank.

93102.5(c)(5) Surfaces within the enclosed storage area, open floor area, walkways around the electroplating or anodizing tank(s), or any surface potentially contaminated with hexavalent chromium, that accumulates or potentially accumulates dust shall be washed down, HEPA vacuumed, hand wiped with damp cloth, or wet mopped, or shall be maintained with the use of non-toxic chemical dust suppressants at least once per week;

Please verify United's interpretation of this subsection. Does a facility have to do all of the following:

1. wash down, HEPA vacuum, hand wipe with damp cloth.

Or instead of item 1:

2. wet mop the area .

Or instead of item 2:

3. use non-toxic chemical dust suppressants.

If a facility complies with 93102.5(c)(1), (2) and (3), then how is it possible to have at the end of each week any liquid or solid accumulation to be cleaned. If the areas are already free of any potential liquid or solid materials, why should a facility go through the burden to clean an area that does not need cleaning?

United recommends that 93102.5(c)(5) be deleted from the proposed regulation.

Of course, if the ARB decides to keep this subsection in the final version, then, we recommend modifying the (d)(5)(E) to read:

93102.5(c)(5) Surfaces within the enclosed storage area, open floor area, walkways around the electroplating or anodizing tank(s), or any surface potentially contaminated with hexavalent chromium, in which there is observed accumulation of liquid or solid material shall be cleaned weekly in one or more of the following manner:

1. **washed down (where liquid is then directed to waste treatment)**
2. **HEPA vacuumed,**
3. **hand wiped with damp cloth, or wet mopped,**
4. **Use of non-toxic chemical dust suppressants**

At Section 93102.6 Special Provisions …. Enclosed Hexavalent Chromium Electroplating Facilities

Why is the emission limit for hexavalent chromium from covered electroplating tanks expressed in mg/dscm instead of mg/amp-hrs?

93102.7(e) Test all emission points. Each emission point subject to the requirements of this regulation must be tested unless a waiver is granted by U.S. EPA, and approved by the permitting agency.

Under what circumstances can a waiver be granted? Does the ARB have any examples of such waivers?

If a facility has multiple stacks of the exact configuration (both process and abatement), can a facility conduct a source test at one exhaust stack to be representative of the remaining exhaust stacks providing certain criteria be met?

Table 93012.10 -- Summary of Inspection and Maintenance Requirements

Under Inspection and Maintenance Requirements column, Item 1, it is suggested that the ARB modify the wording to include "intended performance" as one of the indicators that can be affected.

"1. Visually inspect device to ensure …. no evidence of chemical attack that affects the structural integrity or intended performance of the device."

Since composite mesh pads require periodic wash downs, such activity should remain as part of the maintenance requirements. Therefore, it is suggested <u>not</u> to delete the reference to composite mesh pads

"4. Perform washdown of the composite mesh-pads in accordance with manufacturer's recommendations and/or add fresh makeup water to the packed bed when it is needed."

Under Inspection and Maintenance Requirements column for High Efficiency Particulate Air (HEPA) filters, the inspection requirement (item 1) to look for changes in the pressure drop appears to be vague. Since pressure drop is covered in Section 93102.9(b), looking for changes in the pressure is not an inspection/maintenance related activity, rather an ongoing monitoring activity – just like the CMP, PBS or fiberbed mist eliminators.

Since there is no requirement to conduct pressure drop evaluations for CMP, PBS or fiberbed mist eliminators, there should not be one for HEPA.

It is recommended that the ARB delete item 1 under the HEPA Inspection and Maintenance Requirements

Supplementary to the comments on Section 93102.4 above:

Based on Table 93102.4(a)(1)(A), for a large facility, >60 million amp-hrs /yr and an emission rate of 0.006 mg/amp-hr, using these data points, United arrives at the following hexavalent chromium emission rate:

E = 0.006 mg/amp-hr x 1 g/1000 mg x 1 lb/ 453.592 g x 120,000,000 amp-hrs/yr = 1.58 lbs/yr

Even at 120 million amp-hrs per year, the maximum expected emission is a little over 1 lb. So how can a controlled facility be “large” by exceeding 10 lbs/yr?

On the flip side, a “small” facility identified as <2 lb/yr having an allowable emission rate of 0.15 mg/amp-hr, with an annual rectifier usage of 60 million amp-hrs/yr produces 19.82 lbs/yr. Of course a “small” facility would not come anywhere near 60 million amp-hrs, yet the table has that category/option. In this case, it would appear that a “small” facility would have a maximum rectifier capacity of 2 million amp-hrs/yr to stay just under 2 lbs/yr.

Thank you for your consideration and acceptance of the comments presented above.
Please call or e-mail if you require additional information or clarification.

Sincerely,

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