

FILED

APR 21 2006

HEARING BOARD
BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

BEFORE THE HEARING BOARD

OF THE

MARY ROMAIDIS
CLERK
HEARING BOARD
BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

STATE OF CALIFORNIA

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In the Matter of the Application of)

United Airlines)

For a Variance from Regulation(s):)

California Code of Regulations, Title 17)
Section 93102.5)

DOCKET NO. 3508

ORDER GRANTING REGULAR VARIANCE

1 The above-entitled matter is an Application for Interim and Regular Variance from the
2 provisions of California Code of Regulations, Title 17, Section 93102.5, filed on December 27,
3 2005.

4 Keith Casto of Sedgwick, Detert, Moran & Arnold, LLP appeared as counsel for United
5 Airlines ("Applicant").

6 Alexander Crockett appeared as counsel for the Air Pollution Control Officer ("APCO").

7 Procedural History

8 The original Variance application requested Interim Variance relief and Regular Variance
9 relief from January 1, 2006 to August 30, 2006. The Hearing Board heard the request for the
10 Interim Variance on January 26, 2006 and granted an Interim Variance from January 1, 2006
11 through and including March 31, 2006 or until a decision was made by the Hearing Board on the
12 Regular Variance at the hearing scheduled on March 16, 2006, whichever occurred first, subject
13 to certain conditions. The Hearing Board heard the request for the Regular Variance on March
14 16, 2006 and April 6, 2006. At the April 6, 2006 further hearing, the Applicant subsequently
15 amended its Variance application to request a Regular Variance relief from January 1, 2006 to
16 December 31, 2006.

17 The Clerk of the Hearing Board provided notice of the hearings on the Application for
18 Regular Variance in accordance with the requirements of the California Health and Safety Code.

19 As required by the California Health and Safety Code, the Hearing Board provided the
20 public with the opportunity to testify at the hearing, but no one did so. The Hearing Board heard
21 evidence, testimony and argument from the Applicant and the APCO. The APCO did not oppose
22 the granting of the Regular Variance, subject to certain limitations and conditions.

23 The Hearing Board received evidence and argument, and took the matter under
24 submission for decision. After consideration of the evidence, the Hearing Board voted to grant
25 the request for a Regular Variance from the California Code of Regulations, Title 17, Section
26 93102.5, Subsections (c) and (d), for the period January 1, 2006 through and including
27 September 28, 2006 with respect to six spray booths, and with certain conditions, as set forth in
28 more detail below:

BACKGROUND

1 Applicant, a major international air carrier, operates a maintenance base at San Francisco
2 International Airport under a Major Facility Review (“MFR”) permit from the Bay Area Air
3 Quality Management District (District). Applicant is not considered a small business as
4 described by California Health and Safety Code Section 42352.5(b)(2) and it emits more than ten
5 tons per year of air contaminants.
6

7 Applicant operates a thermal spray operation at the facility which consists of eight
8 thermal spray booths (one of which is currently non-functional), process equipment such as spray
9 guns, control panels, parts stands, robot arms and material feeders, as well as air pollution control
10 systems. The thermal spray operation has been unregulated until the enactment of California
11 Code of Regulations, Title 17, Section 93102.5, which is intended to substantially reduce the
12 emissions of nickel and hexavalent chromium from thermal spray operations. The primary
13 emissions consist of the overspray and fumes generated by the plasma spray process. The booths
14 are part of a complex system of duct hoods, water troughs, ventilation systems, electrical panels,
15 filter systems and water curtains (the current method of air pollution control). Applicant’s
16 thermal spraying operation is critical to the function of the entire maintenance base and, by
17 extension, Applicant’s domestic and international flight operations.

18 Based on the Applicant’s baseline thermal spray material throughput, the Section 93102.5
19 emission factors, and existing thermal spray booth configurations, the new regulation requires
20 that 99.97% at three microns filtration be used for the equipment at United’s thermal spraying
21 operation. The current emissions equipment consists of water curtains (except for one booth,
22 which already has a HEPA filter). Compliance with the Air Toxic Control Measure (ATCM)
23 will require United to expend an estimated 1.5 million dollars in capital and labor costs on a
24 complex and sophisticated engineering project. United currently does not meet Section 93102.5
25 because its thermal spray booths use water curtain emissions control devices instead of the
26 HEPA filtration system required by the regulation.

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DISCUSSION

1 Applicant testified that it was aware of the development of the new regulation and that it
2 initiated analysis of the new regulation and submitted extensive comments during the rule-
3 making. Applicant also testified that it would have been imprudent for the company to invest
4 extensive time and resources until the regulation became final and legally effective (which
5 occurred on September 30, 2005). Applicant further testified that it immediately began to take
6 steps to comply with the regulation after September 30, 2005. These initial steps included taking
7 a baseline emissions inventory, submitting the required application for a permit to operate,
8 meeting with the District's permit engineer to discuss an alternative method of measuring airflow
9 and other issues related to Section 93102.5, contacting emissions control vendors, and
10 conducting briefings with senior management regarding requirements of the project.

11 Applicant testified that, in early 2006, it retained the necessary vendors and began the
12 first of four project phases, i.e. the preparation of engineering drawings, detailing equipment
13 layout and preparing and submitting applications for the necessary permits. Phase No.2 will
14 consist of the construction and acquisition of the emissions control equipment and the next two
15 phases will consist of the installation of the equipment. A detailed schedule incorporating the
16 permit application and approval process and the various planning and construction milestones
17 was submitted to the Hearing Board for its consideration.

18 Applicant also testified that the phased staging of the project, which is necessary to keep
19 the thermal spray shop operating continuously, will extend the completion date of the project as
20 compared to shutting down the entire operation and installing the necessary equipment in one
21 phase.

22 Applicant further testified that it had made a number of operational changes, including
23 reallocating much of the work involving chrome and nickel to the sole booth already equipped
24 with a HEPA filter, shifting some of the workload to the evening hours when there are more
25 favorable meteorological conditions and fewer people are impacted by the emissions, and
26 changing the stack configuration from horizontal to vertical to improve dispersion. These
27 changes resulted in a substantial reduction in the size of the area subject to an acute Hazard Index
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1 of greater than one.

2 Applicant also testified that the impact of temporary shutdown of the non-compliant
3 thermal spray operation would be substantial, including possible layoffs, substantially increased
4 costs associated with outsourcing the thermal spray function, significantly increased inventory
5 costs, and lost customer goodwill and business (Applicant provides thermal spray services to
6 other air carriers).

7 At the hearing of the Interim Variance application on January 26, 2006 the Hearing Board
8 requested that the Applicant prepare a health risk screening analysis. At the hearing of the Full
9 Variance application on March 16, 2006 the Hearing Board requested a further health screening
10 analysis. The analyses showed that the acute risk of nickel exposure is over a Hazard Index of
11 one in only a relatively small area and will affect relatively few individuals so long as
12 modifications and adjustments indicated in the analyses are followed.

13 Applicant also testified that it is carefully monitoring chrome and nickel powder usage on
14 a booth by booth basis in order to ensure compliance with the conditions set forth below.

15 The estimated excess emissions during the entire Regular variance period are as follows:
16 Nickel: 44.001 pounds; Hexavalent Chromium: 4.998 pounds.

17 SPECIFIC FINDINGS

18 The Hearing Board hereby finds pursuant to Health and Safety Code Section 42352 the
19 following:

20 1. That Applicant is currently, or expects that during the period of this Variance it will
21 be, in violation of Subsection (c) and (d) of Section 93102.5 with respect to its thermal spray
22 booths Nos. 2, 3, 8, 9, 10, and 11, because those booths use water curtain emissions control
23 devices instead of the HEPA filtration system required by Section 93102.5(c).

24 2. That, due to conditions beyond the reasonable control of Applicant, requiring
25 immediate compliance would result in the practical closing and elimination of a lawful business.
26 Specifically, the 90-day period between the effective date of the regulation and the deadline for
27 compliance – a condition beyond the control of Applicant – was not long enough for Applicant
28 reasonably to have retrofitted its non-compliant spray booths in order to meet the regulation's

1 filtration standards. The Hearing Board received evidence that the other known thermal spray
2 operation within the District was also unable to meet the deadline for compliance with the
3 regulation. Requiring immediate compliance would result in the arbitrary and unreasonable
4 taking of Applicant's property and the effective closing of the non-compliant portions of
5 Applicant's thermal spray operation until the retrofit project was complete. Closing of the
6 thermal spray operation would effectively close the entire maintenance facility. The "taking"
7 would consist of the deprivation of Applicant's ability to both repair its own aircraft engines and
8 to earn vital revenue by repairing customer engines.

9 In particular, with respect to its own fleet, Applicant would have to compensate for a
10 shutdown by either grounding aircraft, which is not an option given the company's lean aircraft
11 fleet, or purchasing and/or leasing additional parts and/or engines until the thermal spray
12 operation was back in operation. This increase would be both costly and wasteful, as the extra
13 parts would be needed only during the shutdown period. Additionally, it is not clear that the
14 additional parts or engines could be obtained in a timely manner so as to avoid shutting down
15 United's flight operations. In addition, Applicant remanufactures parts for a number of
16 customers (other airlines) pursuant to contracts which require timely performance; the shutdown
17 of the shop would subject Applicant to contractual penalties and its customers' ability to operate
18 may be detrimentally impacted.

19 3. That the closing or taking would be without a corresponding benefit in reducing air
20 contaminants. Specifically, the excess emissions, while not trivial, are relatively low, and
21 Applicant has substantially reduced those emissions and the risks created by those emissions.
22 The benefit to be gained from eliminating these excess emissions would not correspond to the
23 magnitude of the hardship that Applicant would face in not being able to operate its non-
24 compliant booths during the Variance period and the risk of economic disruption throughout the
25 United States if United's service were suddenly stopped.

26 4. That Applicant has given consideration to curtailing operations of the source in lieu of
27 obtaining a Variance. Substantially curtailing or shutting down operation of booths 2, 3, 8, 9, 10,
28 and 11 beyond what is required by this Variance would be a significant hardship for Applicant,

1 its employees, and its thermal spray customers, and, given the vital nature for the work done by
2 the thermal spray operation, may result in the closure of the San Francisco maintenance facility –
3 which serves the entire fleet of United's aircraft.

4 5. During the period the Variance is in effect, Applicant will reduce excess emissions to
5 the maximum extent feasible. Specifically, Applicant has shifted much of the chrome and nickel
6 work into its sole compliant booth, has re-allocated much of the work involving chromium and
7 nickel powder to evening hours, will use no more than one non-compliant booth at any one time,
8 will not spray if the wind is blowing from an unfavorable direction, and has reconfigured the
9 stacks to improve dispersion.

10 6. During the period the variance is in effect, Applicant will continue to comply with
11 existing monitoring requirements and additionally, is indirectly monitoring the emissions of
12 hexavalent chrome and nickel by carefully monitoring powder usage on a booth by booth basis in
13 order to ensure that the new restrictions on the usage of chromium and nickel powders are strictly
14 adhered to by the thermal spray shop technicians.

15
16 THEREFORE, THE HEARING BOARD ORDERS:

17 A Regular Variance from California Code of Regulations, Title 17, Section 93102.5,
18 Subsections (c) and (d) is hereby granted from January 1, 2006 through and including
19 September 28, 2006 with respect to Booth Nos. 2, 3, 8, 9, 10 and 11, subject to the following
20 conditions:

21 1. No non-compliant booths may be operated when the wind direction is from 120 to 225
22 degrees (North is zero degrees). The Applicant shall develop a protocol regarding the procedure
23 for obtaining and recording wind direction and submit it for approval, in writing, to the Air
24 Pollution Control Officer by April 17, 2006. The final protocol shall be submitted, in writing, to
25 the Hearing Board by April 26, 2006 and the protocol shall be implemented by May 1, 2006.

26 2. The Applicant shall operate no more than one non-complaint booth at any one time.
27 The Applicant may prepare and submit a further health risk screening analysis demonstrating
28 acceptable risk levels in impacted commercial areas adjacent to the thermal spray facility in

1 support of a request for authority to operate one or more additional non-complaint booths during
2 the evening hours (i.e. 6 p.m. to 6 a.m.). Such a request for modification of the Regular Variance
3 would be considered by the Hearing Board at a noticed hearing.

4 3. Booth No.10 may only be operated with powders containing chrome or nickel for the
5 processing of parts which must be sprayed in Booth No.10 pursuant to manufacturer or Federal
6 Aviation Administration requirements. Applicant shall provide certification to this effect for
7 each part sprayed in Booth No.10 using powders containing chrome or nickel. No parts that can
8 be sprayed in another booth shall be sprayed in Booth No.10 using powders containing chrome or
9 nickel.

10 4. Any booth shut down for retrofit shall not be restarted until it is compliant and
11 Variance protection for any booth shut down for retrofit shall terminate upon shutdown.
12 Applicant shall provide written notice of each booth shutdown for retrofit to the Hearing Board
13 and District within five days of booth shutdown.

14 5. Applicant shall maintain records of the date, time and amount of chrome and nickel
15 powder sprayed in each booth subject to this Variance and Applicant must provide a quarterly
16 report, in writing, summarizing this information to the Hearing Board and the District. The
17 quarterly report shall be due within 30 days after the end of each quarter, i.e. 30 days after June
18 30, 2006, and 30 days after September 30, 2006.

19 6. California Code of Regulations, Title 17, Section 93102.5(3)(1), Table 3, sets forth
20 specific monitoring requirements for conventional water curtains. Applicant must continue to
21 comply with these monitoring requirements, as well as all other requirements of the regulation
22 from which Applicant has not been granted Variance relief.

23 7. Applicant shall pay the excess emission fees for the remainder of the Regular Variance
24 period (i.e. from March 17, 2006 through September 28, 2006).

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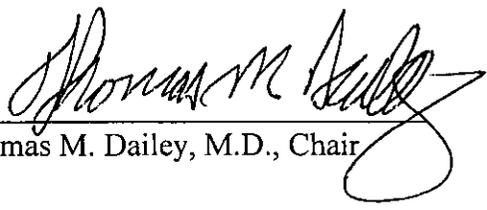
Moved by: Christian Colline, P.E.

Seconded by: Allan R.Saxe, Esq.

AYES: Christian Colline, P.E., Julio Magalhaes, Ph.D., Allan R. Saxe, Esq., and
Thomas M. Dailey, M.D.

NOES: Terry A. Trumbull, Esq.

ABSENT: None



Thomas M. Dailey, M.D., Chair

4-19-06
Date