



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary-Designee

February 23, 2005

Mr. Gary Failler  
Aerothrust Corporation  
5300 Northwest 36<sup>th</sup> Street  
Miami, Florida 33122

Re: Facility No.: 0251246-002

Dear Mr. Failler:

The Department has received the Title V General Permit Notification Form for the chromium electroplating and anodizing facility that you submitted on January 14, 2005.

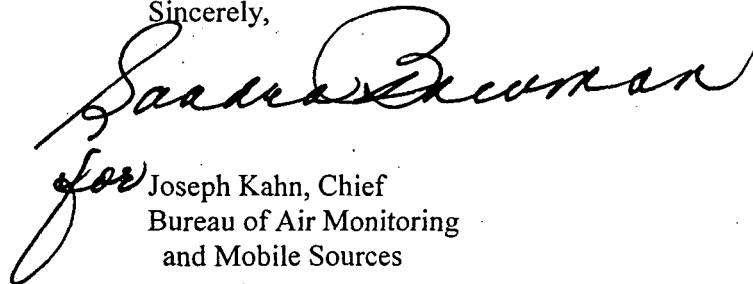
Please note that in January of each year the Department will be mailing fee notices to those facilities using the Title V general permit. This annual operation fee is \$50 and it is due and payable between January 15 and March 1 of each year the facility is in operation and is subject to the requirements of the Title V general permit.

If you have or expect to have any changes in your mailing address, location address, responsible official, or phone number, please notify the Department at the following address:

Title V General Permits Office  
Bureau of Air Monitoring and Mobile Sources MS 5510  
Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

If there are any changes in the facility status, including change of operating parameters or equipment, or if you have any additional questions regarding the Title V General Permit Program, please contact the district or local air program compliance inspector in your area.

Sincerely,



Joseph Kahn, Chief  
Bureau of Air Monitoring  
and Mobile Sources

JK/jw

cc: Ms. Mallika Muthiah, Miami-Dade County

CHROMIUM ELECTROPLATING AND ANODIZING  
AIR GENERAL PERMIT NOTIFICATION FORM

Part III. Notification of Intent to Use General permit

Prior to filling out this form, please read the instructions provided at the end of the form. Send completed form to the address listed in the instructions and keep a copy of the form for your files.

RECEIVED

JAN 14 2000

Bureau of Air Monitoring  
& Mobile Sources

Facility Name and Location

1. Facility Owner/Company Name (Name of corporation, agency, or individual owner): Mr. Jack Risco/Aerotruth Corp.
2. Site Name (For example, plant name or number): AeroThrust Corp.
3. Hazardous Waste Generator Identification Number: FI0080182744
4. Facility Location: 5300 N.W. 36 th. Street Street Address: City: Miami County: Dade Zip Code: 33122
5. Facility Identification Number (DEP Use ONLY - do not fill in): <b>0250422-004</b>

Responsible Official

6. Name and Title of Responsible Official: Name: Mr. Garry Failler Title: V.P. Engineering & Operation
7. Responsible Official Mailing Address: P.O.Box 522236 Miami - Florida 33152 Organization/Firm: AeroThrust Corp. Street Address: 5300 N.W. 36 St. City: Miami County: Dade Zip Code: 33122
8. Responsible Official Telephone Number: Telephone: (305) - 871 1790 Fax: (305) - 305 526 7326

Facility Contact (If different from Responsible Official)

9. Name and Title of Facility Contact (For example, plant manager): Carlos Carrera / Environmental & Safety Mgr.
10. Facility Contact Address: P.O. Box 522236. Miami - Florida 33152 Street Address: 5300 N.W. 36 St. City: Miami County: Dade Zip Code: 33122
11. Facility Contact Telephone Number: Telephone: (305) - 526 7326 Fax: (305) - 526 7372

**Facility Information**

1.a. Provide the information below for each hard electroplating machine at the facility. Indicate the type of machine, the date of its purchase, and the date the control device was installed, if applicable.

**HARD CHROMIUM PLATING TANKS**

DATE PURCHASED	UNIT CLASS (circle one)	DATE CNTRL DEVICE INSTALLED	CONTROL DEVICE (see key)	APPLICABLE STANDARD (see key)
12/16/93	New/Existing	12/16/93	CMP	0.03 mg/dscm
12/16/93	New/Existing	12/16/93	CMP	0.03 mg/dscm
12/16/93	New/Existing	12/16/93	CMP	0.03 mg/dscm
12/16/93	New/Existing	12/16/93	CMP	0.03 mg/dscm
12/16/93	New/Existing	12/16/93	CMP	0.03 mg/dscm
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			

Key for Control Device Type

PBS = packed-bed scrubber  
 CMP = composite mesh pad  
 PBS/CMP = packed-bed scrubber and composite mesh pad  
 FS = fume suppressant only  
 FS/WA = fume suppressant with a wetting agent  
 FM = fiber-bed mist eliminator  
 WA = wetting agent

Applicable Standard Key

a = 0.03 mg/dscm  
 b = 0.015 mg/dscm  
 c = alternative standard for multiple tanks under common control

Is the facility's cumulative potential rectifier capacity greater than 60 million ampere-hours per year?

Yes       No

1.b. Provide the information below for each decorative electroplating or anodizing machine at the facility. Indicate the type of machine, the date of its purchase, and the date the control device was installed, if applicable.

**DECORATIVE AND ANODIZING TANKS**

DATE PURCHASED	UNIT CLASS (circle one)	DATE CNTRL DEVICE INSTALLED	CONTROL DEVICE (see key)	APPLICABLE STANDARD (see key)
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			
	New/Existing			

Key for Control Device Type

PBS = packed-bed scrubber  
CMP = composite mesh pad  
PBS/CMP = packed-bed scrubber and composite mesh pad  
FS = fume suppressant only  
FS/WA = fume suppressant with a wetting agent  
FM = fiber-bed mist eliminator  
WA = wetting agent

Applicable Standard Key

x = 0.01 mg/dscm  
y = 45 dynes/cm  
z = records of bath components  
(trivalent Cr tanks only)  
c = alternative standard for multiple tanks  
under common control

2. Indicate the date by which the facility must meet the requirements of paragraph (5) of Part II:  
(Note: if your facility contains both hard and decorative plating or anodizing units, you must check each applicable date)

January 25, 1996       January 25, 1997

3. Indicate how the facility will fulfill the compliance demonstration:

- The facility will conduct an initial performance test Test conducted in 1991 ( Attach)
- The facility will use a wetting agent to reduce emissions and will meet the existing surface tension limit in No. 1 above.

4. Equipment Monitoring and Recordkeeping Information

Check all logs which are required to be kept on-site in accordance with the requirements of this general permit:

- (a) Equipment maintenance
- (b) Equipment inspection and repair
- (c) Equipment malfunctions
- (d) Operation and maintenance checklist
- (e) Instrument calibration        
(used during initial performance test)
- (f) Start-up, shutdown, malfunction plan
- (g) Performance test results
- (h) Equipment monitoring
- (i) Excess emissions
- (j) Operating periods
- (k) Rectifier capacity
- (l) Fume suppressant records
- (m) Purchase records of wetting agent components

5. Surrender of Existing DEP Air Permit(s)

Please indicate with an "X" the appropriate selection:

I hereby surrender all existing DEP air permits authorizing operation of the facility indicated in this notification form; the permit number(s) are:

No DEP air permits currently exist for the operation of the facility indicated in this notification form.

**Responsible Official Certification**

*I, the undersigned, am the responsible official, as defined in Part II of this form, of the facility addressed in this notification. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this notification are true, accurate and complete. Further, I agree to operate and maintain the air pollutant emissions units and air pollution control equipment described above so as to comply with all terms and conditions of this general permit as set forth in Part II of this notification form.*

*I will promptly notify the Department of any changes to the information contained in this notification.*

GARRY FAILER  
Print name of responsible official

  
Signature

Jan. 14/05  
Date

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**CHROMIUM TANKS  
SPECIFICATIONS**

Thrust Corporation  
Process Unit Description

Oct 30, 1998

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Chromium Plating:

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Narrative: Small aircraft engine parts are chrome plated in any of five tanks of varying size. The dimensions and gallons of each tank are as listed as follows.

Chrome	Dimensions of Surface Area	Approx. Gallons	Capacity Rectifier AMPS
1	36" x 36"	180	150
2	36" x 60"	400	1000
3	36" x 84"	620	500
4	36" x 60"	400	500
5	36" x 120"	800	200 +1000
			<u>3,350 total amps</u>

At 8,760 hours the total AMP - HOUR capacity is 29, 346, 000 amp hours.

sius Aerothrust Corporation  
Facility: 5300 NW 36<sup>th</sup> Street  
Miami FL 33152

Dry Chromium Scrubber Unit Description

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Purpose: To clean chromium plating shop exhaust air of chromium mist and fumes.

Site Location of Unit: Central roof section of above facility address

Unit Components: 1 Greenheck Induction Draft Fan 30 Horse Power rated at 28,000 CFM

1 KCH Dry Demister Unit consisting of one set of two Chevron Blades one set of three mesh pad demisters.

Installation Date: Jan 1991

Installation Initial Compliance Test: August 13-14 1991 EPA NEESHAP Study  
Test Results Attached.

Chromium Exhaust Results: 4.162 ug dscm Average of three test runs. *ⓐ 5" differential Pressure.*

Chromium Exhaust Limitation 30 ug dscm \*

\* Source Clean Air Act Emission Standards for "Small Unit Sources" less than 60 million Amp hour Chromium Electroplating Capacity.

602t0b0s12v1PMaintenance Schedule:

1. Differential Pressure - Daily Check
2. Mechanical Inspection - Quarterly
3. Periodic Washdown - quarterly
4. Demand Washdown - 5.5 " water Differential Pressure Drop



Released  
7/22/98  
S. Henry  
by  
A

SOURCE TEST REPORT  
for  
HEXAVALENT CHROMIUM

*Demister*  
PLATING SCRUBBER INLET AND OUTLET  
AEROTHRUST  
MIAMI, FLORIDA

AUGUST 13 THROUGH 14, 1991

Prepared for:

UNIVERSITY OF CENTRAL FLORIDA  
CIVIL & ENVIRONMENTAL ENGINEERING  
ALAFAYA TRAIL AT UNIVERSITY  
ORLANDO, FLORIDA 32816-0450

Prepared by:

AIR CONSULTING AND ENGINEERING, INC.  
2106 N.W. 67TH PLACE, SUITE 4  
GAINESVILLE, FLORIDA 32606  
(904) 335-1889

314-91-02

BEST AVAILABLE COPY

Table 1 Hexavalent Chromium Emission Results  
 Scrubber Inlet and Outlet  
 Aerothrust  
 Miami, Florida  
 August 13 -14, 1991

Run Number	Time	INLET						OUTLET						Scrubber Efficiency %
		Stack Temp. °F	Moisture %	Flow Rate SCFM	Standard Volume SCF	Total Cr +6 mg	Emissions lbs/Hr	Stack Temp. °F	Moisture %	Flow Rate SCFM	Standard Volume SCF	Total Cr +6 mg	Emissions lbs/Hr	
1	1000-1310	85.4	2.22	13187	81.186	0.762	0.016	90.4	2.18	13617	86.334	0.024	0.0005	96.9
2	1400-1707	86.2	2.21	12168	76.524	1.188	0.025	92.0	1.43	14430	90.894	0.016	0.0003	98.8
3	0900-1205	86.6	2.47	12944	113.187	1.459	0.022	90.3	1.65	14688	112.302	0.024	0.0002	99.1
4	1300-1703	87.7	2.43	12450	144.734	1.417	0.016	92.9	1.44	14327	171.206	0.028	0.0002	98.8

lbs/Hr Cr +6 =  $\frac{\text{mg}}{\text{Std Volume}} \times \frac{\text{lb}}{453.6} \times 10^6$  60 (SCFM)

Efficiency =  $\frac{\text{Inlet} - \text{Outlet}}{\text{Inlet}} \times 100$

*0.014257*  
*1.4257*  
*1.4257*

Average of Tests 2, 3, + 4

(Test 1 had a low inlet concentration so gives an unrepresentative low calculated scrubber efficiency based on outlet at detection limits)

Test	Inlet	conc.	Outlet	conc.	Effic. %
2	$\frac{1.188 \text{ mg}}{76.52 \text{ scf}} \times \frac{35.31 \text{ scf}}{1 \text{ scm}}$	$\frac{1000 \mu\text{g}}{\text{mg}} = \frac{548.2 \mu\text{g}}{\text{scm}}$	$\frac{< 0.016 \text{ mg}}{90.99 \text{ scf}} \times 35.310 = \frac{6.21 \mu\text{g}}{\text{scm}}$		$> 98.8\%$
3	$\frac{1.459}{113.19} \times 35310$	$= \frac{455.1 \mu\text{g}}{\text{scm}}$	$\frac{< 0.024}{212.3} \times 35310 = \frac{3.99 \mu\text{g}}{\text{scm}}$		$> 99.1\%$
4	$\frac{1.417}{144.73} \times 35310$	$= \frac{345.7 \mu\text{g}}{\text{scm}}$	$\frac{< 0.028}{271.2} \times 35310 = \frac{3.645 \mu\text{g}}{\text{scm}}$		$> 98.9\%$
	Aug →	$\frac{449.6 \mu\text{g}}{\text{scm}}$	$< 4.612$		$> 99.0\%$

