

# Compliance Calendar for Florida Chromium Electroplaters

2024

This calendar is designed to assist Chromium Electroplater members with tracking of material usage and compliance assistance. It summarizes environmental regulations and provides a place for you to keep required records. Keep these records at your facility for five years.

Provided by: Small Business Environmental Assistance Program, DEP

# **Environmental Regulations**

A written Operations and Maintenance Plan is required for all facilities except decorative chrome electroplating facilities using a trivalent chromium bath that incorporates a wetting agent as an ingredient. The standards applying to chromic acid baths shall not be met by using a reducing agent to change the form of chromium from hexavalent to trivalent.

Emissions Reduction Technique	What to Monitor	How Often
Composite Mesh Pad (CMP) System	Pressure drop across CMP system	Once daily
Packed-Bed Scrubber (PBS)	Inlet velocity pressure and pressure drop across PBS	Once daily
PBS/CMP System	Pressure drop across CMP system	Once daily
Fiber-Bed Mist Eliminator (FBME)	Pressure drop across FBME and across upstream control used to prevent unplugging	Once daily
Wetting-Agent Type Fume Suppressant	Bath surface tension	Once every 40 hours
Foam Blankets	Foam thickness	Once every 8 hours

# Division of Air Resource Management

For Chromium Electroplaters operation questions, please contact the Small Business Environmental Assistance Program (SBEAP) at 1-800-722-7457, or by email: Small.Business@dep.state.fl.us

- The SBEAP provides free and confidential assistance with environmental regulations.
- If it's located in Broward, Duval, Hillsborough, Miami-Dade, Orange, Palm Beach, Pinellas, or Sarasota counties, visit our Local Program at <a href="https://floridadep.gov/air/air-director/content/local-program-air-contacts">https://floridadep.gov/air/air-director/content/local-program-air-contacts</a>
- For all other counties, go to our District Air Contacts, <a href="https://floridadep.gov/air/air-director/content/district-air-contacts">https://floridadep.gov/air/air-director/content/district-air-contacts</a>



# **Example to Calculate the Cumulative Rectifier Capacity**

# (July 2024 example)

Running total from last month (previous 12-month's total)	Enter running total from last month	420,000
Subtract July 2023 data	Enter the amount from the same month last year, from last year's records or calendar	65,000
Add July 2024 data	Add amount from the current month	70,000
Total	This is your 12-month running total	425,000

#### Criteria to meet:

**Emission standards** 

Work practice standards

Monitoring requirements

Reporting requirements

Recordkeeping

Initial performance tests

Calculate the Cumulative Rectifier Capacity				
Running total from last month (previous 12-month's total)				
January 2023 (subtract)				
January 2024 (add)				
Total				

	Foam Blanket Recordkeeping (Every 8 Hours)						
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)		

	Surface Tension Recordkeeping (Every 40 Hours)				
Date	Time	Surface Tension (DYNES/CM)			

# January 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
I	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

# **Tips and Reminders:**

You can register, renew, or make administrative corrections to AGPs online. Air General Permit Electronic Registration System (AGPERS), <a href="http://www.fldepportal.com/DepPortal/go/apply-operate-airfacility">http://www.fldepportal.com/DepPortal/go/apply-operate-airfacility</a>

Inspections
Recordkeeping
Monthly Ampere Usage

Calculate the Cumulative Rectifier Capacity				
Running total from last month (previous 12-month's total)				
February 2023 (subtract)				
February 2024 (add)				
Total				

	Foam Blanket Recordkeeping (Every 8 Hours)						
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)		

	Surface Tension Recordkeeping (Every 40 Hours)				
Date	Time	Surface Tension (DYNES/CM)			

# February 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			I	2	3	4
5	6	7	8	9	10	H
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

## **Tips and Reminders:**

Reprint a receipt for an online payment, <a href="http://www.fldepportal.com/DepPortal/go/continue/">http://www.fldepportal.com/DepPortal/go/continue/</a>

• Extend process bath life - Lower process bath concentration levels. By experimenting and lowering levels to just above the point where defects start to occur, you can significantly reduce chemical costs.

Inspections	
Recordkeeping	
Monthly Ampere Usage	

Calculate the Cumulative Rectifier Capacity				
Running total from last month (previous 12-month's total)				
March 2023 (subtract)				
March 2024 (add)				
Total				

Foam Blanket Recordkeeping (Every 8 Hours)							
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)		

	Surfa	ce Tension Recordkeeping (Every 40 Hours)
Date	Time	Surface Tension (DYNES/CM)

# March 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				I	2	3
4	5	6	7	8	9	10
H	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

## **Tips and Reminders:**

To make administrative corrections to an Air General Permit, sign in to DEP Business Portal, <a href="http://www.fldepportal.com/go/home">http://www.fldepportal.com/go/home</a>

• Extend process bath life - Test bath chemistry regularly. This will help you determine when more chemicals should be added or when impurities should be removed.

Inspections
Recordkeeping
Monthly Ampere Usage

Calculate the Cumulative Rectifier Capacity				
Running total from last month (previous 12-month's total)				
April 2023 (subtract)				
April 2024 (add)				
Total				

Foam Blanket Recordkeeping (Every 8 Hours)							
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)		

	Surfa	ce Tension Recordkeeping (Every 40 Hours)
Date	Time	Surface Tension (DYNES/CM)

# **April 2024**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
I	2	3	4	5	6	7
8	9	10	H	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

## **Tips and Reminders:**

To register or renew an Air General Permit, go to the DEP Business Portal Air Facility page at <a href="http://www.fldepportal.com/go/home/">http://www.fldepportal.com/go/home/</a> and sign in or register from the link in the upper right corner of the page

• Extend process bath life - Use "purified" water instead of tap water for makeup. Contaminants in tap water can foul up bath chemistry and create extra sludge.

Inspections
Recordkeeping
Monthly Ampere Usage

Calculate the Cumulative Rectifier Capacity			
Running total from last month (previous 12-month's total)			
May 2023 (subtract)			
May 2024 (add)			
Total			

Foam Blanket Recordkeeping (Every 8 Hours)						
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)	

	Surface Tension Recordkeeping (Every 40 Hours)					
Date	Time	Surface Tension (DYNES/CM)				

May 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
		I	2	3	4	5
6	7	8	9	10	H	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

## **Tips and Reminders:**

For more information on AGPs or assistance with online renewal, please contact DEP's Small Business Environmental Assistance Program at 1-800-722-7457

• Extend process bath life - Cover the baths with lids when not in use to prevent unwanted materials from entering the baths.

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Recordkeeping	
Monthly Ampere Usage	<del></del>

Calculate the Cumulative Rectifier Capacity					
Running total from last month (previous 12-month's total)					
June 2023 (subtract)					
June 2024 (add)					
Total					

Foam Blanket Recordkeeping (Every 8 Hours)						
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)	

	Surfa	ce Tension Recordkeeping (Every 40 Hours)
Date	Time	Surface Tension (DYNES/CM)

# June 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
					I	2
3	4	5	6	7	8	9
10	H	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

## **Tips and Reminders:**

For more information on AGPs or assistance with using AGPERS, please contact DEP's Small Business Environmental Assistance Program at 1-800-722-7457

 Reduce chromium emissions - Switch to trivalent chrome or some other coating. Use mechanical agitation instead of air sparging. Add surface tension reducers to allow bubbles to dissipate before reaching the surface instead of bursting.

Inspections	
Recordkeeping	
Monthly Ampere Usage	

Calculate the Cumulative Rectifier Capacity					
Running total from last month (previous 12-month's total)					
July 2023 (subtract)					
July 2024 (add)					
Total					

	Foam Blanket Recordkeeping (Every 8 Hours)						
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)		

	Surface Tension Recordkeeping (Every 40 Hours)						
Date	Time	Surface Tension (DYNES/CM)					

July 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
I	2	3	4	5	6	7
8	9	10	H	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

# **Tips and Reminders:**

Compliance assistance information: Facility Inspection Checklist for Chromium Electroplating and Anodizing Tanks, <a href="https://floridadep.gov/air/permitting-compliance/documents/chromium-facility-inspection-checklist">https://floridadep.gov/air/permitting-compliance/documents/chromium-facility-inspection-checklist</a>

Inspections
Recordkeeping
Monthly Ampere Usage

Calculate the Cumulative Rectifier Capacity				
Running total from last month (previous 12-month's total)				
August 2023 (subtract)				
August 2024 (add)				
Total				

	Foam Blanket Recordkeeping (Every 8 Hours)				
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)

	Surface Tension Recordkeeping (Every 40 Hours)					
Date	Time	Surface Tension (DYNES/CM)				

# August 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			I	2	3	4
5	6	7	8	9	10	H
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

## **Tips and Reminders:**

National Metal Finishing Resource Center, <a href="http://www.nmfrc.org/">http://www.nmfrc.org/</a>

 Reduce drag out - Remove parts slowly (~11 ft/min). This allows the solution to flow back into the process tank. For manual operations having hoists overhead can reduce worker fatigue due to slowly taking out heavy racks or parts.

Inspections	
Recordkeeping	
Monthly Ampere Usage	

# September 2024

Calculate the Cumulative Rectifier Capacity				
Running total from last month (previous 12-month's total)				
September 2023 (subtract)				
September 2024 (add)				
Total				

	Foam Blanket Recordkeeping (Every 8 Hours)					
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)	

	Surface Tension Recordkeeping (Every 40 Hours)					
Date	Time	Surface Tension (DYNES/CM)				

# September 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
						I
2	3	4	5	6	7	8
9	10	H	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

# **Tips and Reminders:**

You can register, renew, or make administrative corrections to AGPs online. Air General Permit Electronic Registration System (AGPERS), <a href="https://www.fldepportal.com/DepPortal/go/apply-operate-airfacility">https://www.fldepportal.com/DepPortal/go/apply-operate-airfacility</a>

Inspections	
Recordkeeping	
Monthly Ampere Usage	

Calculate the Cumulative Rectifier Capacity					
Running total from last month (previous 12-month's total)					
October 2023 (subtract)					
October 2024 (add)					
Total					

	Foam Blanket Recordkeeping (Every 8 Hours)					
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)	

	Surface Tension Recordkeeping (Every 40 Hours)				
Date	Time	Surface Tension (DYNES/CM)			

# October 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
	I	2	3	4	5	6
7	8	9	10	H	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## **Tips and Reminders:**

To register or renew an Air General Permit, go to the DEP Business Portal Air Facility page at <a href="http://www.fldepportal.com/go/home/">http://www.fldepportal.com/go/home/</a> and sign in or register from the link in the upper right corner of the page

• Reduce drag out - Drain boards can be placed over the lips of two adjacent tanks to catch any drips of drag out when transferring parts.

Inspections	
Recordkeeping	
Monthly Ampere Usage	

# November 2024

Calculate the Cumulative Rectifier Capacity				
Running total from last month (previous 12-month's total)				
November 2023 (subtract)				
November 2024 (add)				
Total				

	Foam Blanket Recordkeeping (Every 8 Hours)					
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)	

	Surface Tension Recordkeeping (Every 40 Hours)				
Date	Time	Surface Tension (DYNES/CM)			

# November 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				I	2	3
4	5	6	7	8	9	10
H	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

## **Tips and Reminders:**

For more information on AGPs or assistance with using AGPERS, please contact DEP's Small Business Environmental Assistance Program at 1-800-722-7457

• Chromium electroplaters are eligible to operate in Florida under the terms of an Air General Permit (AGP) pursuant to the requirements of Rule 62-210.310(5)(i), Florida Administrative Code (F.A.C.).

Ins	pections	
Re	cordkeeping	
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# December 2024

Calculate the Cumulative Rectifier Capacity					
Running total from last month (previous 12-month's total)					
December 2023 (subtract)					
December 2024 (add)					
Total					

	Foam Blanket Recordkeeping (Every 8 Hours)					
Date	Time	Thickness (Inches)	Date	Time	Thickness (Inches)	

	Surface Tension Recordkeeping (Every 40 Hours)					
Date	Time	Surface Tension (DYNES/CM)				

# December 2024

Mon	Tue	Wed	Thu	Fri	Sat	Sun
						I
2	3	4	5	6	7	8
9	10	H	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## **Tips and Reminders:**

To register or renew an Air General Permit, sign in to DEP Business Portal, <a href="http://www.fldepportal.com/go/home">http://www.fldepportal.com/go/home</a>

• Hazardous materials storage - Label containers properly, include contents and generation date of hazardous waste. Make sure drums are easily accessible but not stored in high traffic areas where they can be easily knocked over.

Inspections
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Monthly Ampere Usage

#### Summary for EPA Regulations for Plating and Polishing Facilities, 40 CFR Part 63 Subpart WWWWWW

EPA has new requirements to reduce air pollution from plating and polishing facilities. The vapor from these facilities contain Cadmium, Chromium, Manganese, Nickel, Lead, and other harmful chemicals that pose a health risk to anyone who breathes air containing them.

This is a short summary of things that plating and polishing operations must do to comply with the new rule requirements. For more details and assistance, please talk to your local environmental contact.

#### **Specific Requirements**

- Compliance dates: Existing sources by 07/01/10; new sources upon start-up
- Non-cyanide electroplating, electroforming or electro polishing with pH <12</li>
  - Use wetting agent/fume suppressant (WAFS), control device or tank cover
  - Management practices to minimize or eliminate potential emissions
- Flash or short-term electroplating
  - Use tank covers or limit plating time to 3 min/hr or 1 hr/day
  - Management practices to minimize or eliminate potential emissions
- Dry mechanical polishing and thermal spraying (permanent operations)
  - Exhaust emissions to a control device
- Cyanide electroplating (pH ≥12), non-electrolytic plating and coating operations (such as electroless nickel plating and chromate conversion coating), and temporary thermal spraying
  - Management practices to minimize or eliminate potential emissions

#### Management Practices to Minimize or Eliminate Potential Emissions, as Practicable

- Keep tank liquid as still as you can when removing parts processed in the tank.
- Make the drip time as long as you can when removing parts from the tank. Use drain boards (also known as drip shields) or remove parts slowly from the tank.
- Design barrels, racks, and parts to minimize drag out of bath solution (such as by using slotted barrels and tilted racks, or by designing parts with flow-through holes to allow the tank solution to drip back into the tank).
- Use tank covers whenever you can.
- Minimize or reduce heating of process tanks whenever possible.
- Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment.

- Minimize bath contamination however possible by not dropping parts or quickly recovering dropped parts, using distilled/deionized water, filtering the water, pre-cleaning the parts before plating and rinsing pre-treated parts before plating.
- Make sure that the chemicals and other bath ingredients are at the correct levels in the tank.
- Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and washdowns when needed.
- Minimize spills and overflow of tanks as much as possible.
- Use squeegee rolls in continuous or reel-to-reel plating tanks.
- Perform regular inspections to identify leaks and other ways to prevent pollution.

#### Reporting

- Prepare Annual Certification of Compliance report by January 31st of each year for the previous year. Submit by January 31st
  if any deviations occurred during the previous year.
- Prepare and submit Report of Deviations by January 31st of each year, if applicable.
- Submit Initial Notification:
  - Existing sources on 10/29/08
  - New sources on 10/29/08 or upon startup (correction: note rule will be revised)
- Submit Notification of Compliance Status:
  - Existing sources on 07/01/10
  - New sources upon start-up

#### Recordkeeping

- All required notifications and reports, with supporting data.
- Records that show you meet the management practices.
- For cyanide tanks, provide the one-time pH measurement value.
- For non-cyanide tanks, provide the amount and frequency of WAFS additions, if applicable.
- For short-term or flash electroplating tanks, the daily plating time.
- For electroplating tanks using covers as a control option, the time the tank is operated with cover in place.
- Records must be kept for a period of 5 years.

# **District and County Air Program Contacts**

Office	Location	Telephone	Email Address
Northwest District	Pensacola	(850) 595-8300	nwdair@dep.state.fl.us
Northeast District	Jacksonville	(904) 256-1700	DEP_NED@dep.state.fl.us
Southwest District	Tampa	(813) 470-5700	swd_air@dep.state.fl.us
Central District	Orlando	(407) 897-4100	DEP_CD@dep.state.fl.us
Southeast District	West Palm Beach	(561) 681-6600	SED.AIR@dep.state.fl.us
South District	Fort Myers	(239) 344-5600	EPOST_Air_SD@dep.state.fl.us
Miami-Dade County	Miami	(305) 372-6925	airfacilities@miamidade.gov
Broward County	Plantation	(954) 519-1270	AirCompliance@broward.org
Duval County	Jacksonville	(904) 255-7100	aircompliance@coj.net
Hillsborough County	Tampa	(813) 627-2600	aircompliance@epchc.org
Palm Beach County	West Palm Beach	(561) 837-5900	EPOST_AIR_SEPB@flhealth.gov
Pinellas County	Clearwater	(727) 464-4422	AirQuality@pinellascounty.org
Orange County	Orlando	(407) 836-1400	AirPermitsOrangeCounty@ocfl.net
Sarasota County	Sarasota	(941) 861-5000	awq@scgov.net

The Chromium Electroplater Air General Permit is **NOT TRANSFERABLE** and does not follow a change in ownership of the facility. If you are a new owner and have not submitted a registration worksheet and/or have any permitting questions, please contact the Small Business Environmental Assistance Program at 1-800-722-7457.

You can register, renew, change ownership or make administrative corrections to AGPs online. Air General Permit Electronic Registration System (AGPERS), <a href="https://www.fldepportal.com/DepPortal/go/apply-operate-airfacility">https://www.fldepportal.com/DepPortal/go/apply-operate-airfacility</a>

If you prefer to register manually by hardcopy, then print the "Chromium Electroplater Air General Permit Registration Worksheet" located at: https://floridadep.gov/air/permitting-compliance/content/chromium-electroplaters

Registrations and fees should be mailed to the following address:

Department of Environmental Protection Attn: FDEP Air General Permits 2600 Blair Stone Road, MS 5500 Tallahassee, Florida, 32399-2400