

**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Program**

33 N. Stone Avenue ▪ Suite 700 ▪ Tucson, AZ 85701 ▪ Phone: (520) 724-7400

GENERAL AIR QUALITY PERMIT

FOR

**AREA SOURCE PLATING, ANODIZING
& POLISHING FACILITIES**

APPLICATION PACKAGE

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INTRODUCTION

The Pima County Department of Environmental Quality (PDEQ) has created this general permit and application package for those sources that are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations in 40 CFR Part 63, Subpart N: Hard and Decorative Chromium Electroplating and Chromium Anodizing (HDCECA) and Subpart WWWW (6W): Area Source Standards for Plating and Polishing Operations (PPO). This will streamline the permitting process for numerous sources which would otherwise require substantially similar individual source permits. This action shall reduce PDEQ's workload and afford decreased permitting timeframes. To obtain coverage under this general permit, the applicant shall complete the general permit application forms in order to obtain an *Authorization to Operate* (ATO).

This application package has been created to aid the applicant in submitting an application for this general permit. Applicants must complete and submit this package with an application fee in the form of a check or money order payable to PDEQ in the amount of \$540. Please mail the application package and fee to:

**Pima County Department of Environmental Quality
Air Program
33 N. Stone Avenue, Suite 700
Tucson, AZ 85701**

If, after reviewing this package in its entirety, the applicant has questions regarding the application process, they may be directed to PDEQ in writing at the above address or by telephone to: **(520) 724-7400**.

DISCLAIMERS

Completion of this application package does not void the right of the Control Officer under PCC 17.13.010 of the Pima County Code (PCC) to require the applicant to provide supplemental information before processing the application and issuing or denying an Authorization to Operate (ATO) under this General Permit.

Plating Processes Subject to 40 CFR 63 Subpart N

Definitions

The definitions used in this general permit application are defined in 40 CFR, Part 63, Subpart N and are provided below for reference:

Add-on air pollution control device means equipment installed in the ventilation system of chromium electroplating and anodizing tanks for the purposes of collecting and containing chromium emissions from the tank(s).

Affirmative defense means, in the context of an enforcement proceeding, a response or a defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Air pollution control technique means any method, such as an add-on air pollution control device or a chemical fume suppressant that is used to reduce chromium emissions from chromium electroplating and chromium anodizing tanks.

Area source means any stationary source of hazardous air pollutants that is not a major source as defined in this Part. [40 CFR 63.2]

Base metal means the metal or metal alloy that comprises the workpiece.

Bath component means the trade or brand name of each component(s) in trivalent chromium plating baths. For trivalent chromium baths, the bath composition is proprietary in most cases. Therefore, the trade or brand name for each component(s) can be used; however, the chemical name of the wetting agent contained in that component must be identified.

Chemical fume suppressant means any chemical agent that reduces or suppresses fumes or mists at the surface of an electroplating or anodizing bath; another term for fume suppressant is mist suppressant.

Chromic acid means the common name for chromium anhydride (CrO₃).

Chromium anodizing means the electrolytic process by which an oxide layer is produced on the surface of a base metal for functional purposes (e.g., corrosion resistance or electrical insulation) using a chromic acid solution. In chromium anodizing, the part to be anodized acts as the anode in the electrical circuit, and the chromic acid solution, with a concentration typically ranging from 50 to 100 grams per liter (g/L), serves as the electrolyte.

Chromium anodizing tank means the receptacle or container along with the following accompanying internal and external components needed for chromium anodizing: rectifiers fitted with controls to allow for voltage adjustments, heat exchanger equipment, circulation pumps, and air agitation systems.

Chromium electroplating tank means the receptacle or container along with the following internal and external components needed for chromium electroplating: Rectifiers, anodes, heat exchanger equipment, circulation pumps, and air agitation systems.

Composite mesh-pad system means an add-on air pollution control device typically consisting of several mesh-pad stages. The purpose of the first stage is to remove large particles. Smaller particles are removed in the second stage, which consists of the composite mesh pad. A final stage may remove any reentrained particles not collected by the composite mesh pad.

Contains hexavalent chromium means, the substance consists of, or contains 0.1 percent or greater by weight, chromium trioxide, chromium (VI) oxide, chromic acid, or chromic anhydride.

Decorative chromium electroplating means the process by which a thin layer of chromium (typically 0.003 to 2.5 microns) is electrodeposited on a base metal, plastic, or undercoating to provide a bright surface with wear and tarnish resistance. In this process, the part(s) serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Typical current density applied during this process ranges from 540 to 2,400 Amperes per square meter (A/m²) for total plating times ranging between 0.5 to 5 minutes.

Electroplating or anodizing bath means the electrolytic solution used as the conducting medium in which the flow of current is accompanied by movement of metal ions for the purposes of electroplating metal out of the solution onto a work piece or for oxidizing the base material.

Emission limitation means, for the purposes of this subpart, the concentration of total chromium allowed to be emitted expressed in milligrams per dry standard cubic meter (mg/dscm), or the allowable surface tension expressed in dynes per centimeter (dynes/cm).

Enclosed hard chromium electroplating tank means a chromium electroplating tank that is equipped with an enclosing hood and ventilated at half the rate or less that of an open surface tank of the same surface area.

Existing affected source means an affected hard chromium electroplating tank, decorative chromium electroplating tank, or chromium anodizing tank, the construction or reconstruction of which commenced on or before February 8, 2012.

Facility means the major or area source at which chromium electroplating or chromium anodizing is performed.

Fiber-bed mist eliminator means an add-on air pollution control device that removes contaminants from a gas stream through the mechanisms of inertial impaction and Brownian diffusion. These devices are typically installed downstream of another control device, which serves to prevent plugging, and consist of one or more fiber beds. Each bed consists of a hollow cylinder formed from two concentric screens; the fiber between the screens may be fabricated from glass, ceramic plastic, or metal.

Foam blanket means the type of chemical fume suppressant that generates a layer of foam across the surface of a solution when current is applied to that solution.

Fresh water means water, such as tap water, that has not been previously used in a process operation or, if the water has been recycled from a process operation, it has been treated and meets the effluent guidelines for chromium wastewater.

Hard chromium electroplating or industrial chromium electroplating means a process by which a thick layer of chromium (typically 1.3 to 760 microns) is electrodeposited on a base material to provide a surface with functional properties such as wear resistance, a low coefficient of friction, hardness, and corrosion resistance. In this process, the part serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Hard chromium electroplating process is performed at current densities typically ranging from 1,600 to 6,500 A/m² for total plating times ranging from 20 minutes to 36 hours depending upon the desired plate thickness.

Hexavalent chromium means the form of chromium in a valence state of +6.

Large, hard chromium electroplating facility means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity greater than or equal to 60 million ampere-hours per year (amp-hr/yr).

Major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

[40 CFR 63.2]

Maximum cumulative potential rectifier capacity means the summation of the total installed rectifier capacity associated with the hard chromium electroplating tanks at a facility, expressed in amperes, multiplied by the maximum potential operating schedule of 8,400 hours per year and 0.7, which assumes that electrodes are energized 70 percent of the total operating time. The maximum potential operating schedule is based on operating 24 hours per day, 7 days per week, 50 weeks per year.

New affected source means an affected hard chromium electroplating tank, decorative chromium electroplating tank, or chromium anodizing tank, the construction or reconstruction of which commenced after February 8, 2012.

Open surface hard chromium electroplating tank means a chromium electroplating tank that is ventilated at a rate consistent with good ventilation practices for open tanks.

Operating parameter value means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that the Permittee is in continual compliance with the applicable emission limitation or standard.

Packed-bed scrubber means an add-on air pollution control device consisting of a single or double packed bed that contains packing media on which the chromic acid droplets impinge. The packed-bed section of the scrubber is followed by a mist eliminator to remove any water entrained from the packed-bed section.

Perfluorooctane sulfonic acid (PFOS)-based fume suppressant means a fume suppressant that contains 1 percent or greater PFOS by weight.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard

Reconstruction, unless otherwise defined in a relevant standard, means the replacement of components of an affected or a previously nonaffected source to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
- (2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

Research or laboratory operation means an operation whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and that is not involved in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

Small, hard chromium electroplating facility means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity less than 60 million amp-hr/yr.

Stalagmometer means an instrument used to measure the surface tension of a solution by determining the mass of a drop of liquid by weighing a known number of drops or by counting the number of drops obtained from a given volume of liquid.

Surface tension means the property, due to molecular forces, that exists in the surface film of all liquids and tends to prevent liquid from spreading.

Tank operation means the time in which current and/or voltage is being applied to a chromium electroplating tank or a chromium anodizing tank.

Tensiometer means an instrument used to measure the surface tension of a solution by determining the amount of force needed to pull a ring from the liquid surface. The amount of force is proportional to the surface tension.

Trivalent chromium means the form of chromium in a valence state of +3.

Trivalent chromium process means the process used for electrodeposition of a thin layer of chromium onto a base material using a trivalent chromium solution instead of a chromic acid solution.

Wetting agent means the type of commercially available chemical fume suppressant that materially reduces the surface tension of a liquid.

Plating and Polishing Facilities Subject to 40 CFR 63 Subpart 6W

Definitions

The definitions used in Part II of this general permit are defined in 40 CFR, Part 63, Subpart 6W, unless otherwise noted, are provided below for reference:

Batch Electrolytic Process Tank means a tank used for an electrolytic process in which a part or group of parts, typically mounted on racks or placed in barrels, is placed in the tank and immersed in an electrolytic process solution as a single unit (i.e., as a batch) for a predetermined period of time, during which none of the parts are removed from the tank and no other parts are added to the tank, and after which the part or parts are removed from the tank as a unit.

Bath means the liquid contents of a tank, as defined in this section, which is used for electroplating, electroforming, electropolishing, or other metal coating processes at a plating and polishing facility.

Bench-scale means any operation that is small enough to be performed on a bench, table, or similar structure so that the equipment is not directly contacting the floor.

Capture system means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device, as part of a complete control system. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

Cartridge filter means a type of control device that uses perforated metal cartridges containing a pleated paper or non-woven fibrous filter media to remove PM from a gas stream by sieving and other mechanisms. Cartridge filters can be designed with single use cartridges, which are removed and disposed after reaching capacity, or continuous use cartridges, which typically are cleaned by means of a pulse-jet mechanism.

Composite mesh pad means a type of control device similar to a mesh pad mist eliminator except that the device is designed with multiple pads in series that are woven with layers of material with varying fiber diameters, which produce a coalescing effect on the droplets or PM that impinge upon the pads.

Continuous electrolytic process tank means a tank that uses an electrolytic process and in which a continuous metal strip or other type of continuous substrate is fed into and removed from the tank continuously. This process is also called reel-to-reel electrolytic plating.

Control device means equipment that is part of a control system that collects and/or reduces the quantity of a pollutant that is emitted to the air. The control device receives emissions that are transported from the process by the capture system.

Control system means the combination of a capture system and a control device. The capture system is designed to collect and transport air emissions from the affected source to the control device. The overall control efficiency of any control system is a combination of the ability of the system to capture the air emissions (i.e., the capture efficiency) and the control device efficiency. Consequently, it is important to achieve good capture to ensure good overall control efficiency. Capture devices that are known to provide high capture efficiencies include hoods, enclosures, or any other duct intake devices with ductwork, dampers, manifolds, plenums, or fans.

Conversion coatings are coatings that form a hard metal finish on an object when the object is submerged in a tank bath or solution that contains the conversion coatings. Conversion coatings for the purposes of this rule include coatings composed of chromium, as well as the other plating and polishing metal HAP, where no electrical current is used.

Cyanide plating means plating processes performed in tanks that use cyanide as a major bath ingredient and that operate at pH of 12 or more, and use or emit any of the plating and polishing metal HAP, as defined in this section. Electroplating and electroforming are performed with or without cyanide. The cyanide in the bath works to dissolve the HAP metal added as a cyanide compound (e.g., cadmium cyanide) and creates free cyanide in solution, which helps to corrode the anode. These tanks are self-regulating to a pH of 12 due to the caustic nature of the cyanide bath chemistry. The cyanide in the bath is a major bath constituent and not an additive; however, the self-regulating chemistry of the bath causes the bath to act as if wetting agents/fume suppressants are being used and to ensure an optimum plating process. All cyanide plating baths at pH greater than or equal to 12 have cyanide-metal complexes in solution. The metal HAP to be plated is not emitted because it is either bound in the metal-cyanide complex or reduced at the cathode to elemental metal, and plated onto the immersed parts. Cyanide baths are not intentionally operated at pH less 12 since unfavorable plating conditions would occur in the tank, among other negative effects.

Deviation means any instance in which an affected source or an owner or operator of such an affected source:

- (1) Fails to meet any requirement or obligation established by this rule including, but not limited to, any equipment standard (including emissions and operating limits), management practice, or operation and maintenance requirement;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this rule and that is included in the operating permit for any affected facility required to obtain such a permit; or
- (3) Fails to meet any equipment standard (including emission and operating limits), management standard, or operation and maintenance requirement in this rule during startup, shutdown, or malfunction.

Dry mechanical polishing means a process used for removing defects from and smoothing the surface of finished metals and formed products after plating or thermal spraying with any of the plating and polishing metal HAP, as defined in this section, using automatic or manually-operated machines that have hard-faced abrasive wheels or belts and where no liquids or fluids are used to trap the removed metal particles. The affected process does not include polishing with use of pastes, liquids, lubricants, or any other added materials.

Electroforming means an electrolytic process using or emitting any of the plating and polishing metal HAP, as defined in this section, that is used for fabricating metal parts. This process is essentially the same as electroplating except that the plated substrate (mandrel) is removed, leaving only the metal plate. In electroforming, the metal plate is self-supporting and generally thicker than in electroplating.

Electroless plating means a non-electrolytic process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metallic ions in a plating bath or solution are reduced to form a metal coating at the surface of a catalytic substrate without the use of external electrical energy. Electroless plating is also called non-electrolytic plating. Examples include, but are not limited to, chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating.

Electrolytic plating processes means electroplating and electroforming that use or emit any of the plating and polishing metal HAP, as defined in this section, where metallic ions in a plating bath or solution are reduced to form a metal coating on the surface of parts and products using electrical energy.

Electroplating means an electrolytic process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metal ions in solution are reduced onto the surface of the work piece (the cathode) via an electrical current. The metal ions in the solution are usually replenished by the dissolution of metal from solid metal anodes fabricated of the same metal being plated, or by direct replenishment of the solution with metal salts or oxides; electroplating is also called electrolytic plating.

Electropolishing means an electrolytic process performed in a tank after plating that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which a work piece is attached to an anode immersed in a bath, and the metal substrate is dissolved electrolytically, thereby removing the surface contaminant; electropolishing is also called electrolytic polishing. For the purposes of this subpart, electropolishing does not include bench-scale operations.

Fabric filter means a type of control device used for collecting PM by filtering a process exhaust stream through a filter or filter media. A fabric filter is also known as a baghouse.

Filters, for the purposes of this part, include cartridge, fabric, or HEPA filters, as defined in this section.

Flash electroplating means an electrolytic process performed in a tank that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that is used no more than 3 cumulative minutes per hour or no more than 1 cumulative hour per day.

General Provisions of this part (40 CFR part 63, subpart A) means the section of the Code of Federal Regulations (CFR) that addresses air pollution rules that apply to all HAP sources addressed in part 63, which includes the National Emission Standards for Hazardous Air Pollutants (NESHAP).

HAP means hazardous air pollutant as defined from the list of 188 chemicals and compounds specified in the CAA Amendments of 1990; HAP are also called “air toxics.” The five plating and polishing metal HAP, as defined in this section, are on this list of 188 chemicals.

High efficiency particulate air (HEPA) filter means a type of control device that uses a filter composed of a mat of randomly arranged fibers and is designed to remove at least 99.97 percent of airborne particles that are 0.3 micrometers or larger in diameter.

Maintenance is any process at a plating and polishing facility that is performed to keep the process equipment or the facility operating properly and is not performed on items to be sold as products.

Major facility for HAP is any facility that emits greater than 10 tpy of any HAP, or that emits a combined total of all HAP of over 25 tpy, where the HAP used to determine the total facility emissions are not restricted to only plating and polishing metal HAP or from only plating and polishing operations.

Mesh pad mist eliminator means a type of control device, consisting of layers of interlocked filaments densely packed between two supporting grids that remove liquid droplets and PM from the gas stream through inertial impaction and direct interception.

Metal coating operation means any process performed either in a tank that contains liquids or as part of a thermal spraying operation, that applies one or more plating and polishing metal HAP, as defined in this section, to the surface of parts and products used in manufacturing. These processes include but are not limited to: non-chromium electroplating; electroforming; electropolishing; non-electrolytic metal coating processes, such as chromate conversion coating, electroless nickel plating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and thermal or flame spraying.

Metal HAP content of material used in plating and polishing is the HAP content as determined from an analysis or engineering estimate of the HAP contents of the tank bath or solution, in the case of plating, metal coating, or electropolishing; or the HAP content of the metal coating being applied in the case of thermal spraying. Safety data sheet (SDS) information may be used in lieu of testing or engineering estimates but is not required to be used.

New source means any affected source for which you commenced construction or reconstruction after March 14, 2008.

Non-cyanide electrolytic plating and electropolishing processes means electroplating, electroforming, and electropolishing that uses or emits any of the plating and polishing metal HAP, as defined in this section, performed without cyanide in the tank. These processes do not use cyanide in the tank and operate at pH values less than 12. These processes use electricity and add or remove metals such as metal HAP from parts and products used in manufacturing. Both electroplating and electroforming can be performed with cyanide as well.

Non-electrolytic plating means a process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metallic ions in a plating bath or solution are reduced to form a metal coating at the surface of a catalytic substrate without the use of external electrical energy. Non-electrolytic plating is also called electroless plating. Examples include chromate conversion coating, nickel acetate sealing, electroless nickel plating, sodium dichromate sealing, and manganese phosphate coating.

Packed-bed scrubber means a type of control device that includes a single or double packed bed that contains packing media on which PM and droplets impinge and are removed from the gas stream. The packed-bed section of the scrubber is followed by a mist eliminator to remove any water entrained from the packed-bed section.

Plating and polishing facility means a facility engaged in one or more of the following processes that uses or emits any of the plating and polishing metal HAP, as defined in this section: electroplating processes other than chromium electroplating (i.e., non-chromium electroplating); electroless plating; other non-electrolytic metal coating processes performed in a tank, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; thermal spraying; and the dry mechanical polishing of finished metals and formed products after plating or thermal spraying. Plating is performed in a tank or thermally sprayed so that a metal coating is irreversibly applied to an object. Plating and polishing does not include any bench-scale processes.

Plating and polishing metal HAP means any compound of any of the following metals: cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form, with the exception of lead. Any material that does not contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), and does not contain manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as reported on the Material Safety Data Sheet for the material, is not considered to be a plating and polishing metal HAP.

Plating and polishing process tanks means any tank in which a process is performed at an affected plating and polishing facility that uses or has the potential to emit any of the plating and polishing metal HAP, as defined in this section. The processes performed in plating and polishing tanks include the following: electroplating processes other than chromium electroplating (i.e., non-chromium electroplating) performed in a tank; electroless plating; and non-electrolytic metal coating processes, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and electropolishing. This term does not include tanks containing solutions that are used to clean, rinse or wash parts prior to placing the parts in a plating and polishing process tank, or subsequent to removing the parts from a plating and polishing process tank. This term also does not include any bench-scale operations.

PM means solid or particulate matter that is emitted into the air.

Repair means any process used to return a finished object or tool back to its original function or shape.

Research and development process unit means any process unit that is used for conducting research and development for new processes and products and is not used to manufacture products for commercial sale, except in a de minimis manner.

Short-term plating means an electroplating process that uses or emits any of the plating and polishing metal HAP, as defined in this section and that is used no more than 3 cumulative minutes per hour or 1 hour cumulative per day.

Startup of the tank bath is when the components or relative proportions of the various components in the bath have been altered from the most recent operating period. Startup of the bath does not include events where only the tank's heating or agitation and other mechanical operations are turned back on after being turned off for a period of time.

Tank cover for batch process units means a solid structure made of an impervious material that is designed to cover the entire open surface of a tank or process unit that is used for plating or other metal coating processes.

Tank cover for continuous process units means a solid structure or combination of structures, made of an impervious material that is designed to cover at least 75 percent of the open surface of the tank or process unit that is used for continuous plating or other continuous metal coating processes.

Temporary thermal spraying means a thermal spraying operation that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that lasts no more than 1 hour in duration during any one day and is conducted in situ. Thermal spraying that is conducted in a dedicated thermal spray booth or structure is not considered to be temporary thermal spraying.

Thermal spraying (also referred to as metal spraying or flame spraying) is a process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which a metallic coating is applied by projecting heated, molten, or semi-molten metal particles onto a substrate. Commonly-used thermal spraying methods include high velocity oxy-fuel (HVOF) spraying, flame spraying, electric arc spraying, plasma arc spraying, and detonation gun spraying. This operation does not include spray painting at ambient temperatures.

Water curtain means a type of control device that draws the exhaust stream through a continuous curtain of moving water to scrub out suspended PM.

Wetting agent/fume suppressant means any chemical agent that reduces or suppresses fumes or mists from a plating and polishing tank by reducing the surface tension of the tank bath.

INSTRUCTIONS

Step 1: Applicability: Determine whether or not you qualify for this General Permit.

You qualify for this general permit if you meet all of the following conditions:

- Own or operate a plating and/or polishing facility that is subject to the NESHAP Subpart N for Hard and Decorative Chromium Electroplating and Chromium Anodizing (HDCECE) and/or the NESHAP Subpart 6W for Plating and Polishing Operations (PPO). If you do not have such an affected facility, you do not qualify for this general permit. Affected facilities in which research and laboratory operations are performed (as defined in the application package definitions) are exempt from the requirement to apply for and obtain an air quality permit.
- Other than those units to be covered by this General Permit, there are no other **emission units** co-located at the facility that (1) *are subject to a permitting requirement*¹ and/or (2) *emit significant quantities of any pollutant*;²
- There are no **operations or activities** conducted on site which (1) *otherwise require a permit*¹ and/or (2) *emit significant quantities of any pollutant*;² and
- If necessary*, you are willing to accept restrictions on operations to ensure your source does not become a major source.

Step 2: Complete and sign the STANDARD PERMIT APPLICATION FORM (Page 15 of this package).

Step 3: Complete FORM 2: Process Tank Identification for Tanks Subject to Subpart N (Page 16 of this package).

Include all requested applicable information for each chromium electroplating or chromium anodizing tank located on-site subject to Subpart N. PDEQ **will not begin processing** the application without a thorough identification of the emission controls at the facility.

Step 4: Complete FORM 3: Identification of Tank and Non-Tank Processes Subject to Subpart 6W (Page 17 of this package).

Include all requested applicable information for each tank and non-tank process located on site subject to Subpart 6W. PDEQ **will not begin processing** the application without a thorough identification of the compliance methods for emission controls at the facility.

Step 5: Complete FORM 4: NESHAP Applicability (Pages 18 – 21 of this package).

With regard to each operation or tank, the applicant shall determine and indicate (1) whether such units are subject to Subpart N or Subpart 6W **and** if so, (2) the applicable tank or operation category determined from the NESHAP applicability determination.

Step 6: Complete FORM 5: Other Activities Declaration Form (Page 22 of this package). If you have no other potential emission sources or activities on site, please state so.

Step 7: Review this application package and sign FORM 6: Statement of Compliance (Page 23 of this package).

¹ Such equipment includes, but is not limited to boilers, generators, petroleum liquid storage vessels, paint spray operations and so on. Such equipment, if demonstrated to be insignificant, may not exempt your source from coverage under this General Permit.

² Significant emissions are: CO – 100 tons per year (tpy), NO_x – 40 tpy, SO_x – 40 tpy, VOC – 40 tpy, PM₁₀ – 15 tpy, any individual HAP – 10 tpy, and any combination of HAPs – 25 tpy.

Step 8: Submit this completed application package, any required supplementary documents and the \$540.00 application fee to:

**Pima County Department of Environmental Quality
Air Program
33 N. Stone Avenue, Suite 700, Tucson, AZ 85701.**

STANDARD PERMIT APPLICATION FORM FOR CLASS II/III GENERAL PERMITS

(As required by A.R.S. § 49-426 and PCC 17.13.080)

1. Permit to be issued to (Arizona Corporate Commission Registered Name): _____

2. Mailing Address: _____
City: _____ State: _____ ZIP: _____
3. Plant Name (if different than item #1): _____
4. Proposed Equipment/Plant Location Address: _____
City: _____ State: _____ ZIP: _____
5. Name of Responsible Official: _____
Official Title of RO: _____
Phone: _____ Email: _____
6. Invoicing Contact (IC) _____
Phone: _____ Email: _____
IC Mailing Address: _____
City: _____ State: _____ ZIP: _____
7. Plant/Site Manager/Contact Person: _____
Phone: _____ Email: _____
8. General Nature of Business: _____
Standard Industrial Classification Code(s): _____ Permit Class: _____
9. Type of Organization: Corporation Individual Owner Partnership Government Entity Other
10. Permit Application Basis (Check all that apply): New Source General Permit Portable Source
Renewal Revision: Administrative Minor Significant Existing Permit # _____
Date of Commencement of Construction or Modification: _____
Is any of the equipment to be leased to another individual or entity? Yes No
12. Signature of Responsible Official of Organization: _____ Date: _____

Form 2: Identification of Tank Processes Subject to Subpart N

(Duplicate this form as necessary for **each** HDCECA* tank operated at your facility)

<u>Tank ID</u>	<u>Affective Source</u> (Check One for Each Tank ID)	<u>Emission Control Device</u> See Definitions Pages 4-6 of this Application (Check All that Apply)	<u>Tank Enclosed</u>		<u>Potential Rectifier ≥ 60 million?</u> ampere-hours per year (amp-hr/yr)	<u>Tank Category</u> Determine From NESHAP Subpart N Applicability Determination, Form 4 of this Application Packet
_____	<input type="checkbox"/> Hard Chromium Electroplating	<input type="checkbox"/> Packed-bed scrubber (PBS) <input type="checkbox"/> Composite mesh pad (CMP)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes (unit is considered 'Large') <input type="checkbox"/> No (unit is considered 'Small')	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
	<input type="checkbox"/> Decorative Chromium Electroplating ▼ Using a Trivalent Chromium Bath? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Wetting Agent (WA) type Fume Suppressant <input type="checkbox"/> Foam Blanket (FB) type Fume Suppressant <input type="checkbox"/> Fiber bed mist eliminator (FBME)	N/A for Decorative Chromium Electroplating			
	<input type="checkbox"/> Chromium Anodizing	<input type="checkbox"/> Alternative control device (please specify) <hr/> <hr/>	N/A for Chromium Anodizing			

* HDCECA Tank (Hard and Decorative Chromium Electroplating and Chromium Anodizing) Tank

Form 3: Identification of Tank and Non-Tank Processes Subject to Subpart 6W
 (Duplicate this form as necessary for **each** Tank and Non-Tank Process at your facility)

<u>Tank or Process ID</u>	<u>Type of Operation</u>	<u>HAP Emitted or Used</u>	<u>Compliance Method (Check All that Apply)</u>	<u>Process Category Determine From Form 4</u>
	<input type="checkbox"/> Noncyanide Electroplating <input type="checkbox"/> Continuous (Reel to Reel) <input type="checkbox"/> Batch <input type="checkbox"/> Short-term (Flash) <input type="checkbox"/> Electropolishing <input type="checkbox"/> Electroforming <input type="checkbox"/> Cyanide Electroplating <input type="checkbox"/> Electroless Plating <input type="checkbox"/> Electroless Coating/Dipping <input type="checkbox"/> Chrome Conversion Coating <input type="checkbox"/> Nickel Acetate Sealing <input type="checkbox"/> Sodium Dichromate Sealing <input type="checkbox"/> Manganese Phosphate Coating <input type="checkbox"/> Other _____ <input type="checkbox"/> Thermal (Flame) Spraying <input type="checkbox"/> Existing Permanent Line <input type="checkbox"/> New Permanent Line <input type="checkbox"/> Temporary (in-situ) <input type="checkbox"/> Dry Mechanical Polishing	<input type="checkbox"/> Cd <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> Mn <input type="checkbox"/> Ni	<input type="checkbox"/> Wetting Agent/Fume Suppressant <input type="checkbox"/> Vented to a Control Device; describe: _____ <input type="checkbox"/> Tank Cover <input type="checkbox"/> Time Limit (short-term plating only) <input type="checkbox"/> Management Practices (Check all that Apply): <input type="checkbox"/> Minimize bath agitation when removing any parts processed in the tank, as practicable except when necessary to meet part quality requirements. <input type="checkbox"/> Maximize the draining of bath solution back into the tank, as practicable, by extending drip time when removing parts from the tank; using drain boards (also known as drip shields); or withdrawing parts slowly from the tank, as practicable. <input type="checkbox"/> Optimize the design of barrels, racks, and parts to minimize dragout 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), as practicable. <input type="checkbox"/> Use tank covers, if already owned and available at the facility, whenever practicable. <input type="checkbox"/> Minimize or reduce heating of process tanks, as practicable (e.g., when doing so would not interrupt production or adversely affect part quality). <input type="checkbox"/> Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment associated with affected sources, as practicable. <input type="checkbox"/> Minimize bath contamination, such as through the prevention or quick recovery of dropped parts, use of distilled/de-ionized water, water filtration, pre-cleaning of parts to be plated, and thorough rinsing of pre-treated parts to be plated, as practicable. <input type="checkbox"/> Maintain quality control of chemicals, and chemical and other bath ingredient concentrations in the tanks, as practicable. <input type="checkbox"/> Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practicable. <input type="checkbox"/> Minimize spills and overflow of tanks, as practicable. <input type="checkbox"/> Use squeegee rolls in continuous or reel-to-reel plating tanks, as practicable. <input type="checkbox"/> Perform regular inspections to identify leaks and other opportunities for pollution prevention.	<input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9

Form 4: NESHAP Applicability

Answer all of the questions below, and follow all instructions, to determine what category your tank or non-tank process belongs to and if you are eligible for coverage under this general permit. Make as many copies of this Form 4 as are necessary to cover all of your operations and **complete a separate Form 4 for each affected tank or non-tank process.**

The terms used in Questions 1 – 8 of this applicability determination are defined on Pages 4- 7 of this general permit application. The terms used in Questions 9 – 19 of this applicability determination are defined on Pages 8 – 11.

1. Does the facility perform hard chromium electroplating, decorative electroplating or chromium anodizing (Subject to Subpart N)?

YES NO

If **YES**, continue to **Question 2**.

If **NO**, the tank may be subject to Subpart 6W. Proceed to **Question 9** to determine eligibility under this General Permit.

2. Does the affected facility only conduct research and laboratory operations?

YES NO

If **YES**, the unit is **NOT** eligible for coverage under this General Permit.

If **NO**, continue to **Question 3**.

3. Is the chromium electroplating or chromium anodizing taking place at an area source?

YES NO

If **YES**, continue to **Question 4**.

If **NO**, the tank may be subject to Subpart 6W. Proceed to **Question 9** to determine eligibility under this General Permit.

4. Is the unit in question an open surface hard chromium electroplating tank?

YES NO

If **YES**, this open surface, hard chromium electroplating tank is a **Category 1 Tank**; please indicate this fact on Form 2 for the appropriate tank. There are no other questions to answer for this tank process.

If **NO**, continue to **Question 5**.

5. Is the unit in question an enclosed surface hard chromium electroplating tank?

YES NO

If **YES**, this enclosed surface, hard chromium electroplating tank is a **Category 2 Tank**; please indicate this fact on Form 2 for the appropriate tank. There are no other questions to answer for this tank process.

If **NO**, continue to **Question 6**.

6. Is the unit in question a decorative chromium electroplating tank using a chromic acid bath or a chromium anodizing tank?

YES NO

If **YES**, this tank is a *Category 3 Tank*; please indicate this fact on Form 2 for the appropriate tank. There are no other questions to answer for this tank process.

If **NO**, continue to **Question 7**.

7. Is the unit in question a decorative chromium electroplating tank using a trivalent chromium bath that does **NOT** Incorporate a wetting agent?

YES NO

If **YES**, this tank is a *Category 3 Tank*; please indicate this fact on Form 2 for the appropriate tank. There are no other questions to answer for this tank process.

If **NO**, continue to **Question 8**.

8. Is the unit in question a decorative chromium electroplating tank using a trivalent chromium bath that does incorporate a wetting agent?

YES NO

If **YES**, this tank is a *Category 4 Tank*; please indicate this fact on Form 2 for the appropriate tank. There are no more questions to answer for this tank process.

If **NO**, the tank may be subject to Subpart 6W. Proceed to **Question 9** to determine eligibility under this General Permit.

9. Does the facility perform non-chromium electroplating or polishing operations with the potential to emit any compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead that are used or have the potential to be emitted in quantities of 0.1 percent or more or 1.0 percent or more for elemental or compounds of manganese (Sources Subject to Subpart 6W)?

YES NO

If **YES**, continue to question 10

If **NO**, the process is **NOT** eligible for coverage under this General Permit. You **MAY** be required to obtain an individual stationary source permit (please contact PDEQ for further permitting information).

10. Does the affected facility only conduct research and laboratory operations?

YES NO

If **YES**, the facility is **NOT** eligible for coverage under this General Permit.

If **NO**, continue to **Question 11**.

11. Is the non-chromium plating and polishing operations taking place at an area source?

YES NO

If **YES**, continue to **Question 12**.

If **NO**, the unit is **NOT** eligible for coverage under this General Permit. You **MAY** be required to obtain an individual stationary source permit (please contact PDEQ for further permitting information).

12. Does the operation in question take place in a tank?

YES NO

If **YES**, continue to **Question 13**.

If **NO**, continue to **Question 18**.

13. Is the operation in question electrolytic?

YES NO

If **YES**, continue to **Question 14**.

If **NO**, continue to **Question 17**.

14. Is the operation in question a non-cyanide electroplating, electroforming or electropolishing process?

YES NO

If **YES**, this tank is a *Category 5 Tank*; please indicate this fact on Form 3 for the appropriate tank. There are no other questions to answer for this tank process.

If **NO**, continue to Question 16

16. Is the operation in question a cyanide electroplating process?

YES NO

If **YES**, this tank is a *Category 6 Tank*; please indicate this fact on Form 3 for the appropriate tank. There are no other questions to answer for this tank process.

If **NO**, the unit is **NOT** eligible for coverage under this General Permit. You **MAY** be required to obtain an individual stationary source permit (please contact PDEQ for further permitting information).

17. Is the operation in question a non-electrolytic plating or metal coating process?

YES NO

If **YES**, this tank is a **Category 9 Tank**; please indicate this fact on Form 3 for the appropriate tank. There are no other questions to answer for this tank process.

If **NO**, the unit is **NOT** eligible for coverage under this General Permit. You **MAY** be required to obtain an individual stationary source permit (please contact PDEQ for further permitting information).

18. Is the operation in question thermal spraying?

YES NO

If **YES**, this process is a **Category 7 Process**; please indicate this fact on Form 3 for the appropriate process. There are no other questions to answer for this tank process.

If **NO**, continue to **Question 19**.

19. Is the operation in question dry mechanical polishing?

YES NO

If **YES**, this process is a **Category 8 Process**; please indicate this fact on Form 3 for the appropriate process. There are no other questions to answer for this tank process.

If **NO**, the process is **NOT** eligible for coverage under this General Permit. You **MAY** be required to obtain an individual stationary source permit (please contact PDEQ for further permitting information).

Form 6: Statement of Compliance

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it files a complete application, but prior to release of a proposed permit. Should there be any discrepancies between this application package and Title 17 of the Pima County Code (PCC), 40 CFR 63 Subpart N or 40 CFR 63 Subpart 6W, the PCC and CFR shall be preferred.

This statement must be signed by a Responsible Official. Applications without a signed statement will be deemed incomplete.

The responsible official is defined as a person who is in charge of principal business functions or who performs policy or decision making functions for the business. This may also include an authorized representative for such persons. For a complete definitions see Pima County Air Quality Control, Title 17, Section 17.04.340(A)(200).

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Pima County Department of Environmental Quality (PDEQ) as public record. I also attest that I am in compliance with the applicable requirement(s) and will continue to comply with such requirements and any future requirements that become effective during the life of my permit. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the requirements of Title 17 of the Pima County Code and any permit issued thereof.

Name (Print/Type): _____ Title: _____

Signature: _____ Date: _____

Certification of Truth, Accuracy, and Completeness

PCC 17.13.010(H) – Certification of Truth, Accuracy, and Completeness

Any application form, report, or compliance certification submitted pursuant to this Chapter shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate, and complete.

By my signature I, (Name) _____, hereby certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Signature: _____

Title: _____ Date: _____