PFAS SERVICES FOR THE METAL PLATING INDUSTRY

DELIVERING IN THE MARKET

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MARKETS WE SERVE

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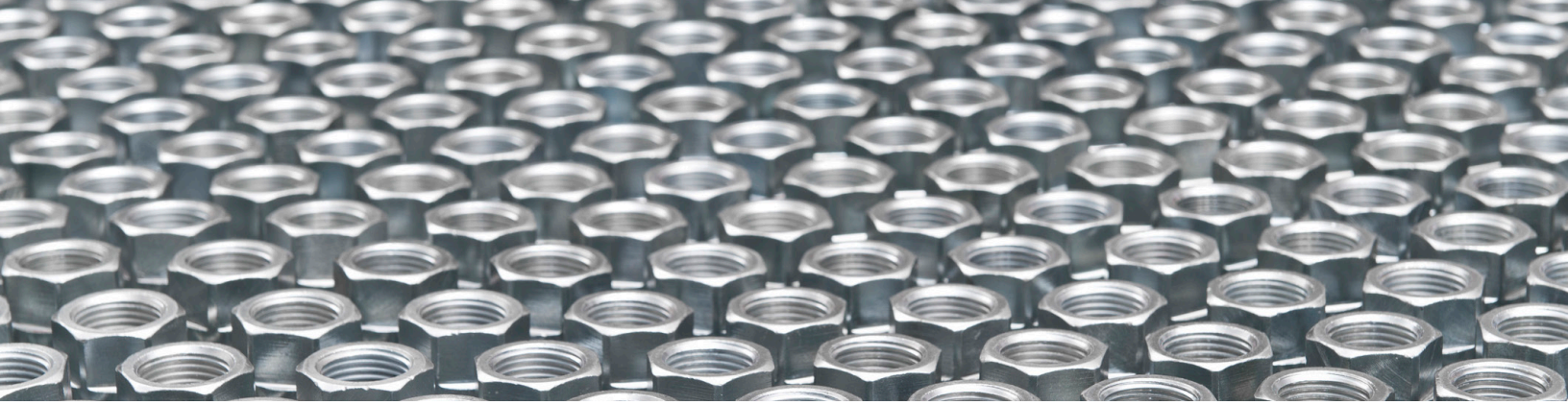
Digital Solutions



PFAS SERVICES FOR THE METAL PLATING INDUSTRY

PFAS are a group of more than 5,000 man-made chemicals that are found in a variety of products including firefighting foams, lubricants and mist suppressants. The regulatory framework and science of PFAS are rapidly evolving, creating business and environmental risks related to storage, management and use of PFAS-containing materials.

In the metal-plating industry, PFAS-containing materials have been used to control hazardous chromic acid mist and improve the stability and quality of copper, nickel and tin electroplating baths since the 1950s. In 2015, the United States Environmental Protection Agency (USEPA) banned the use of perfluorooctane sulfonic acid (PFOS) for use in chrome plating mist suppressants. At this time, the metal plating industry began the use of mist suppressants containing other PFAS chemicals, including 6:2-fluorotelomer-based compounds, a perfluorobutane sulfonic acid (PFBS) compound and other PFAS chemicals known as F-53 and F-53B. In general, the use of F-53 and F-53B has mainly been seen in China and not so prevalent in the United States.

Although PFAS were once a useful additive in the electroplating industry, factories that used these chemicals are now potentially liable for managing impacted soil, surface water and groundwater around their facility. Today, sites around the world may have PFAS contamination from any of these sources. Traces of these chemicals are now showing up in groundwater sources and can also be present from legacy use of these compounds, even if the use of the PFAS-containing materials has been discontinued.

An increasing number of states and municipalities are conducting groundwater, surface water and soil sampling to determine PFAS levels in these media, and EPA has conducted two rounds of drinking water supply sampling under the Safe Drinking Water Act. Many states and municipalities are also requiring facilities that discharge stormwater and wastewater to sample receiving streams for PFAS compounds to identify potential sources of PFAS.

What Do You Care About?

Question	TRC's Solutions
Do I have PFAS?	· Risk management reviews/ planning · Site investigations · Water and wastewater testing · Air testing
Is it really mine?	· Forensics · Fate and transport modeling · Background sampling
How much is it going to cost?	· Risk assessment · Alternative remedies · Cost/scenario modeling
When will I be done?	· Regulatory negotiations · Smart closure strategies

OUR SERVICES

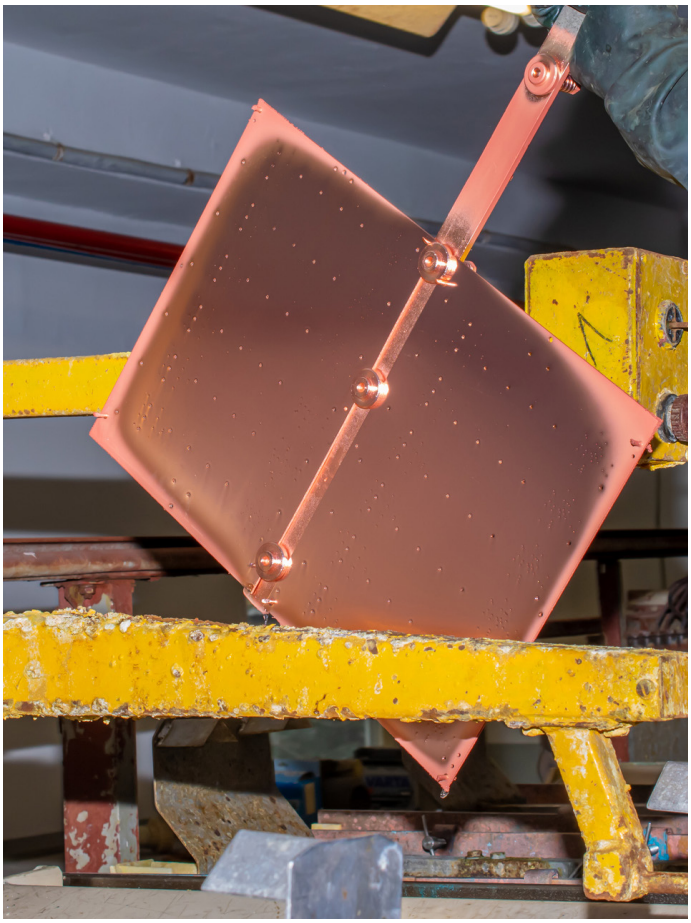
Metal-plating facilities are advised to develop proactive response strategies to better understand current and historical use of fluorinated chemicals in their operations. Some potential action items that TRC can support you with are as follows:

- Conduct a facility or company-wide risk management review to understand potential PFAS exposure
  - Initiate system-wide chemical inventories to identify PFAS-containing materials (e.g., mist suppressants) in the supply chain
  - Evaluate the supply chain regarding the presence of PFAS; work with suppliers, if possible, for verification statements of PFAS compliance
  - Understand the PFAS-free alternatives available
  - Track regulations in applicable states and understand PFAS waste disposal requirements at different locations
  - Follow new enforcement and compliance obligations involving PFAS and PFAS-containing products
  - Document potential areas of PFAS impacts
- Implement a plan and schedule for switching out materials that contain PFAS, if possible
- Develop and update plans and standard operating procedures to address environmental, health and safety risks, such as stormwater pollution, hazmat spills and wastewater discharges
- Create goal-oriented sampling plans of stormwater, wastewater, soil, groundwater and air, as appropriate
- Develop a plan for disposal of PFAS-containing materials
- Implement a plan for the inspection, maintenance and repair of sub-slab/in-slab infrastructure (e.g., drains, vaults, sump pits, trenches) with potential connections to subsurface soils and groundwater
- Perform inspections of plant air scrubbers, roof drains and drain discharges

Nationwide Expertise in PFAS Research and Regulation

TRC's Center of Research and Expertise (CORE) is a national leader in PFAS risk management, regulatory support, toxicity evaluation, forensics, fate and transport, sampling, testing and remediation methods. TRC will bring our extensive experience to your project to help you manage your concerns, solve your problems and move on to your next priority with confidence.

TRC's overall goal is to help clients manage their risks at a time of regulatory uncertainty. With staff located throughout the country, we bring both a national and local perspective to PFAS-related issues and how developing legislation will impact the future.



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