Chromium Electroplating NESHAP Talking Points
August 2012

How Electroplating Facilities Demonstrate Compliance with NESHAP

- Facilities have two options for demonstrating compliance with Chromium Electroplating NESHAP
  - Use fume suppressants to meet surface tension levels
  - Meet applicable emissions limits with control equipment (e.g., pack bed scrubber, composite mesh pads and HEPA filters) and initial stack test and demonstrate ongoing compliance by measuring pressure drop across the control equipment

- Facilities also use fume suppressants to lower workplace exposure levels pursuant to OSHA's 2006 revised PEL

- Many hard chrome platers do not use fume suppressants due to product quality issues (pitting of parts) and the fume suppressants can also interfere with the control equipment

- EPA reviewed data on facilities that use control equipment and fume suppressants and demonstrate compliance by meeting the applicable emission limits
  - EPA concluded that these facilities use the fume suppressants in addition to the control equipment to meet emission limits
  - EPA's conclusion belies logic because facilities demonstrate compliance with the emission limits with an initial stack test (often from 1996) and ongoing performance of the control equipment to measure pressure drop across the equipment.

Risk and Control Technology Issues

- EPA determined that risk posed by emissions from chromium electroplating operations is ACCEPTABLE
  - Because industry has reduced chromium emissions by over 99.7% since 1995 from 173 tons to below one half ton
  - Risk is ACCEPTABLE, even based on EPA's over-estimation of chromium emissions

- Despite not identifying any NEW TECHNOLOGY for controlling chromium emissions, EPA assumed that facilities can further reduce chromium emissions easily and cost effectively with the addition of fume suppressants -- This is a FAULTY ASSUMPTION

- EPA has limited and dated data that indicate that PFOS-based fume suppressants can lower chromium emissions based on surface tension -- it may be reasonable to conclude that PFOS-based fume suppressants are effective in reducing chromium emissions

- PFOS-based fume suppressants are being phased out
    - Market pressure through EPA's voluntary Stewardship Program
    - EPA Action Plan to eliminate Long-Chain PFCs
    - PFOS ban as part of the proposed Chromium Electroplating NESHAP
    - Global efforts to eliminate the use of PFOS products

- EPA has no data to indicate that non-PFOS fume suppressants can lower chromium emissions to the levels of the proposed emission limits, but non-PFOS fume suppressants have proven effective in lowering surface tension levels to the new proposed surface tension levels

- EPA assumes that non-PFOS fume suppressants will perform the same as PFOS fume suppressants because of similar surface tension levels that are achieved – This a FAULTY ASSUMPTION

Recent German Study on the Control of Chromium Emissions with Fume Suppressants

- Recent German study clearly demonstrates that non-PFOS fume do not control chromium emissions as well as PFOS fume suppressants at the same surface tension levels

- EPA has no scientific or technical basis for its proposed emission limits based on the use on non-PFOS fume suppressants

- EPA has considered not including ban on PFOS fume suppressants in Chromium Electroplating NESHAP
    - Not including the ban in the rule would not change anything because soon PFOS fume suppressants will no longer be available due to market and regulatory impacts
    - Keeping PFOS that poses a known risk to human health and the environment to control an ACCEPTABLE RISK from chromium emissions is not sound environmental policy

- EPA has indicated that if the results of the German study are correct, then the rationale for demonstrating compliance through surface tension levels would no longer be valid
    - EPA would then have to justify achievable emissions limits that are cost effective for all sources based on control equipment or other technology options

- It would be irresponsible for EPA to move forward with the proposed emission limits without any credible scientific data

EPA's New Cost Effective Analysis

- Initially EPA concluded that most facilities would meet the proposed emission limits with the addition of fume suppressants or more fume suppressants where they are already in use, but EPA has recently indicated that it has revised its technology review and cost effectiveness analysis for facilities to meet the new proposed emissions limits

- For ***small hard chrome*** platers EPA assumes that
    - 80 % will use fume suppressants to meet the new proposed emission limits
    - 15% will install new composite mesh pad (CMP) emission control systems
    - 5% will install HEPA filters to existing control equipment

- These are faulty assumptions for ***small hard chrome*** platers because
    - Non-PFOS fume suppressants cannot reduce chromium emissions to the levels of the new proposed limits
    - Very few, if any, facilities would need to upgrade from packed bed scrubber to a CMP because they already have a CMP and it is not clear that a new CMP (which are currently in use in the industry) would meet the new proposed emission limits
    - EPA has already concluded that the use of HEPA filters is not a cost-effective control technology, particularly for small hard chrome platers

- For ***large hard chrome*** platers EPA assumes that
    - 10 % will use fume suppressants to meet the new proposed emission limits
    - 70% will install new composite mesh pad (CMP) emission control systems
    - 20% will install HEPA filters to existing control equipment

- These are faulty assumptions for ***large hard chrome*** platers because
    - Non-PFOS fume suppressants cannot reduce chromium emissions to the levels of the new proposed limits
    - All hard chrome platers would already have at least CMP technology in place to control chromium emissions, so facilities would not need to add new CMP technology. In addition, EPA has also not identified any tweaks to existing controls that would enable facilities to meet the new proposed emission limits
    - EPA has already concluded that the use of HEPA filters is not a cost-effective control technology

- Given the capital investment needed to install and upgrade control equipment and the small amount of chromium emissions that would be reduced with such technology, the new identified control technology options identified in the revised cost effectiveness analysis would not be technically feasible or cost-effective

- It would be arbitrary and capricious for EPA to move forward with the proposed emission limits without any credible scientific data that the proposed limits can be achieved with the technology options identified by EPA in a cost-effective manner