This document is scheduled to be published in the
Federal Register on 02/08/2012 and available online at
http://federalregister.gov/a/2012-02434, and on FDsys.gov

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2010-0600; FRL-9626-7]

RIN 2060–AQ60

National Emission Standards for Hazardous Air Pollutant Emissions: Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks; and Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants

AGENCY: Environmental Protection Agency (EPA).

ACTION: Supplemental notice of proposed rulemaking.

SUMMARY: This action supplements our proposed amendments to National Emission Standards for Hazardous Air Pollutant Emissions for Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks; and Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants, which were published on October 21, 2010(75 FR 65068, October 21,2010). In that action, EPA proposed amendments to these NESHAP under section 112(d)(6) and (f)(2) of the Clean Air Act. Specifically, this action presents a new technology review and a new residual risk analysis for chromium electroplating and anodizing facilities and proposes revisions to the NESHAP based on those reviews. This action also proposes to remove an alternative compliance method for Steel Pickling hydrochloric acid regeneration plants. Finally, this action proposes to

incorporate electronic reporting requirements into both NESHAP.

DATES: Comments must be received on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].** Under the Paperwork Reduction Act, comments on the information collection provisions are best assured of having full effect if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

Public Hearing. If anyone contacts the EPA requesting to speak at a public hearing by [**INSERT DATE 10 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], a public hearing will be held on [**INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

ADDRESSES: You may submit comments, identified by Docket ID No. EPA-HQ-OAR-2010-0600, by one of the following methods:

- Federal eRulemaking Portal: www.regulations.gov: Follow the instructions for submitting comments.
- Email: a-and-r-docket@epa.gov. Include Docket ID No. EPA-HQ-OAR-2010-0600 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2010-0600.
- Mail: U.S. Postal Service, send comments to: EPA Docket Center, EPA West (Air Docket), Attention Docket ID No. EPA-HQ-OAR-2010-0600, U.S. Environmental Protection Agency,

Mailcode: 2822T, 1200 Pennsylvania Ave., NW, Washington, DC 20460. Please include a total of two copies. In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Attn: Desk Officer for EPA, 725 17th Street, NW, Washington, DC 20503.

- Hand Delivery: U.S. Environmental Protection Agency, EPA West (Air Docket), Room 3334, 1301 Constitution Ave., NW, Washington, DC 20004. Attention Docket ID No. EPA-HQ-OAR-2010-0600. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions. Direct your comments to Docket ID No. EPA-HQ-OAR-2010-0600. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or email. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through www.regulations.gov, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket, visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm.

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2010-0600. All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Mr. Phil Mulrine, Sector Policies and Programs Division (D243-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone (919) 541-5289; fax number: (919) 541-3207; and email address: mulrine.phil@epa.gov. For specific information regarding the risk modeling methodology, contact Mr. Mark Morris, Health and Environmental Impacts Division (C539-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (919) 541–5416; fax number: (919) 541–0840; and email address: morris.mark@epa.gov.

SUPPLEMENTARY INFORMATION:

Organization of this Document. The information in this preamble is organized as follows:

I. General Information

A. Does this action apply to me?

The regulated industrial source categories that are the subject of this proposal are listed in Table 1 to this preamble. Table 1 is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by the proposed action for the source categories listed. These standards, and any changes considered in this rulemaking, would be directly applicable to sources as a federal program. Thus, federal, state, local, and tribal government entities are not affected by this proposed action. Table 1 shows the regulated categories affected by this proposed action.

Table 1. NESHAP and Industrial Source Categories Affected by This Proposed Action

NESHAP and Source Category		NAICS code[1]	MACT code[2]
Chromium Electroplating NESHAP, Subpart N	Chromium Anodizing Tanks	332813	1607
	Decorative Chromium Electroplating	332813	1610
	Hard Chromium	332813	1615

	Electroplating		
Steel Pickling – HCl Process Facilities And Hydrochloric Acid Regeneration Plants NESHAP, Subpart CCC		3311, 3312	0310

[1] North American Industry Classification System
[2] Maximum Achievable Control Technology

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this proposal will also be available on the World Wide Web (WWW) through the Technology Transfer Network (TTN). Following signature by the EPA Administrator, a copy of this proposed action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. The TTN provides information and technology exchange in various areas of air pollution control.

Additional information is available on the residual risk and technology review (RTR) web page at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. This information includes source category descriptions and detailed emissions and other data that were used as inputs to the risk assessments.

C. What should I consider as I prepare my comments for the EPA?

Submitting CBI. Do not submit information containing CBI to the EPA through http://www.regulations.gov or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on a disk or CD ROM that you mail to the EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. If you submit a CD ROM or disk that does not contain CBI, mark the outside of the disk or CD ROM clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. Send or deliver information identified as CBI only to the following address: Roberto Morales, OAQPS Document Control Officer (C404-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID Number EPA-HQ-OAR-2010-0600.

D. When would a public hearing occur?

If a public hearing is held, it will be held at 10:00 a.m. on [**INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] and will be held at a location to be determined.

Persons interested in presenting oral testimony at the hearing should contact Mr. Phil Mulrine, Office of Air Quality Planning and Standards, Sector Policies and Programs Division (D243-02), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone (919) 541-5289; fax number: (919) 541-3207; email address: mulrine.phil@epa.gov.

II. Background Information

A. Overview of the Chromium Electroplating and Chromium Anodizing Source Categories

The Chromium Electroplating NESHAP regulates emissions of chromium compounds from three source categories: hard chromium electroplating, decorative chromium electroplating, and chromium anodizing. The NESHAP apply to both major sources and area sources. The NESHAP were promulgated on January 25, 1995 (60 FR 4963) and codified at 40 CFR part 63, subpart N. We proposed amendments to the NESHAP on June 5, 2002 (67 FR 38810) to address issues related to changes in control technology, monitoring and implementation. The amendments were promulgated on July 19, 2004 (69 FR 42885).

1. Hard Chromium Electroplating

The Hard Chromium Electroplating source category consists of facilities that plate base metals with a relatively thick layer of chromium using an electrolytic process. Hard chromium electroplating provides a finish that is resistant to wear, abrasion, heat, and corrosion. These facilities plate large cylinders and industrial rolls used in construction equipment and printing presses, hydraulic cylinders and rods, zinc die castings, plastic molds, engine components, and marine hardware.

The NESHAP distinguishes between large hard chromium electroplating facilities and small hard chromium electroplating facilities. Large hard chromium electroplating facilities are defined as any such facility with a cumulative annual rectifier capacity equal to or greater than 60 million ampere-hours per year (amp-hr/yr). Small hard chromium electroplating facilities are defined as any facility with a cumulative annual rectifier capacity less than 60 million amp-hr/yr. The NESHAP requires all affected tanks located at large hard chromium electroplating facilities to meet an emissions limit of 0.015 milligrams per dry standard cubic meter (mg/dscm). Alternatively, large hard chromium facilities also can comply with the NESHAP by maintaining the surface tension limits in affected tanks equal to or less than 45 dynes per centimeter (dynes/cm), if measured using a stalagmometer, or 35 dynes/cm, if measured using a tensiometer.

The Chromium Electroplating NESHAP requires affected tanks at existing small hard chromium electroplating facilities to meet an emissions limit of 0.030 mg/dscm and affected tanks at new small hard chromium electroplating facilities to meet a limit of 0.015 mg/dscm. Alternatively, these sources have the option of complying with surface tension limits equal to or less than 45 dynes per centimeter (dynes/cm), if measured using a stalagmometer, or 35 dynes/cm, if measured using a tensiometer. Under the current NESHAP, any small hard chromium electroplating tank for which construction or reconstruction was commenced on or before December 16, 1993 (i.e., the proposal date for the original NESHAP) is subject to the existing source standards and any small hard chromium electroplating tank constructed or reconstructed after December 16, 1993 is subject to new source standards.

We estimate that there currently are approximately 230 large hard chromium electroplating facilities and 450 small hard chromium electroplating facilities in operation. Of the 450 small hard chromium electroplating facilities, we estimate that 150 of these facilities have one or more tanks that are subject to the new source standards, and the affected sources at the other 300 facilities are subject to the existing source standards.

2. Decorative Chromium Electroplating

The Decorative Chromium Electroplating source category consists of facilities that plate base materials such as brass, steel, aluminum, or plastic with layers of copper and nickel, followed by a relatively thin layer of chromium to provide a bright, tarnish- and wear-resistant surface. Decorative chromium electroplating is used for items such as automotive trim, metal furniture, bicycles, hand tools, and plumbing fixtures. We estimate that there currently are approximately 590 decorative chromium electroplating plants in operation. The NESHAP requires all existing and new decorative chromium electroplating sources to meet an emissions limit of 0.01 mg/dscm, or meet the surface tension limits of 45 dynes/cm, if measured using a stalagmometer, or 35 dynes/cm, if measured using a tensiometer.

3. Chromium Anodizing

The Chromium Anodizing source category consists of facilities that use chromic acid to form an oxide layer on aluminum to provide resistance to corrosion. The chromium anodizing process is used to coat aircraft parts (such as wings and landing gears) as well as architectural structures that are subject to high stress and corrosive conditions. We estimate that there currently are about 180 chromium anodizing plants in operation. The NESHAP requires all existing and new chromium anodizing sources to meet an emissions limit of 0.01 mg/dscm, or meet the surface tension limits of 45 dynes/cm, if measured using a stalagmometer, or 35 dynes/cm, if measured using a tensiometer.

B. What is the history of the Chromium Electroplating and Chromium Anodizing Risk and Technology Reviews?

Pursuant to section 112(f)(2) of the CAA, we evaluated the residual risk associated with the NESHAP in 2010. At that time, we also conducted a technology review, as required by section 112(d)(6). Based on the results of our initial residual risk and technology reviews, we proposed on October 21, 2010 (75 FR 65071) that the risks due to HAP emissions from these source categories were acceptable and that no additional controls were necessary to provide an ample margin of safety to protect public health because we had not identified additional controls that would reduce risk at reasonable costs. Thus, we did not propose to revise the NESHAP under 112(f)(2). However, as explained in that proposal publication, we were concerned about the potential cancer risks due to emissions from this category and asked for additional information and comments on this issue.

As a result of our technology review in 2010, we proposed the following amendments to the NESHAP to:

- incorporate several housekeeping practices into 40 CFR 63.342(f);
- phase out the use of wetting agent fume suppressants (WAFS) based on perfluorooctyl sulfonates (PFOS);
- revise the startup, shutdown, and malfunction provisions (SSM) in the rule;
- revise the monitoring and testing requirements; and,

- make a few technical corrections to the NESHAP.

The comment period for the October 21, 2010 proposal ended on December 6, 2010, and we are not re-opening the comment period on those issues. However, we will address the comments we received during the October 21, 2010 to December 6, 2010 public comment period at the time we take final action.

C. Overview of the Steel Pickling Source Category

Steel pickling is a treatment process in which the heavy oxide crust or mill scale that develops on the steel surface during hot forming or heat treating is removed chemically in a bath of aqueous acid solution. Pickling is a process applied to metallic substances that removes surface impurities, stains, or crusts to prepare the metal for subsequent plating (e.g., with chromium) or other treatment, such as galvanization or painting. An acid regeneration plant is defined in the rule as the equipment and processes that regenerate fresh hydrochloric acid pickling solution from spent pickle liquor using a thermal treatment process. The HAP emission points from the steel pickling process include steel pickling baths, steel pickling sprays, and tank vents. The HAP emission point from acid regeneration plants is the spray roaster.

We estimate that there are approximately 80 facilities subject to the MACT standards that are currently performing steel pickling and/or acid regeneration. Many of these facilities are located adjacent to integrated iron and steel manufacturing plants or electric arc furnace steelmaking facilities (minimills) that produce steel from scrap. Facilities that regenerate HCl may or may not be located at steel pickling operations.

D. What is the history of the Steel Pickling Risk and Technology Review?

Pursuant to section 112(f)(2) of the CAA, we evaluated the residual risk associated with the NESHAP in 2010. We also conducted a technology review, as required by section 112(d)(6) of the CAA. Based on the results of our residual risk assessment, we proposed on October 21, 2010 that the risks were acceptable and that there were no additional cost effective controls to reduce risk further and that the NESHAP provides an ample margin of safety to protect public health and prevented an adverse environmental effect. In that notice, we also proposed no changes based on the technology review because we did not identify any new, feasible technologies that warranted changes to the NESHAP. We are not taking comment on these proposed determinations.

E. What data collection activities were conducted to support this action?

1. Chromium Electroplating and Chromium Anodizing source categories

Several commenters expressed concern that the data set used in the risk assessment that was relied on for the October 2010 proposal was not based on actual data from an adequate number of facilities and was not representative of the current chromium electroplating industry. In response to these comments, we contacted 28 State and local air pollution control agencies to request information on the industry. The requested information included facility data (name, location, number of employees), process type, tank design and operating parameters, annual hours of operation, emission control technology, control device operating parameters, emission test data, and other available supporting documents, such as emission inventory reports and operating permits. Agencies were asked to provide data on the 5 to 10 facilities that were likely to have the highest risk based on either chromium emissions or close proximity to sensitive receptors, and any additional facilities for which the data were readily available. The agencies were also asked to review the list of facilities we had in our Chromium Electroplating Database and update the list to the extent that they had more recent information on plant closings, new plants, or changes in processes.

We received the most current data available from a total of 24 agencies. We supplemented the data provided by the agencies with additional information we obtained from operating permits and other information downloaded from State websites. We also received some data from an industry organization (i.e., the National Association for Surface Finishing, located in Washington, D.C.). The updated data set included information on 346 plants. After eliminating redundancies in the data and deleting data for facilities that were no longer in operation or no longer performing chromium electroplating or anodizing, the new data set included annual emissions for 301 plants currently in operation. Of these, approximately 128 plants were located in California, and 173 plants were located in other States. Finally, we performed a quality control check of plant geographic coordinates and updated the coordinates for approximately 400 plants, focusing on those plants most likely to have high emissions.

We believe the current data set to be significantly better than the data set we relied on for the 2010 proposal for a number of reasons. The current data set provides improved emissions estimates for many facilities, based on actual emissions test data; provides actual emissions data for a larger number of facilities than had been modeled for the 2010 proposal; includes an updated plant list that accounts for facilities that have opened recently and eliminates nearly 200 plants that have recently closed or have stopped performing chromium electroplating; includes more plant-specific data on numbers and types of electroplating tanks, types of emissions controls, and control system operating parameters; and corrected geographic locations (latitudes, longitudes) for hundreds of chromium electroplating and anodizing facilities.

For the October 21, 2010, proposal we used the actual emissions data available at the time, which covered far fewer plants, and, in many cases, were based on general emission factors and other data not specific to the plant in question. To fill in data gaps for the October 2010 proposal, we relied on plant capacity, process design, process operating, and control device data collected during the development of the original MACT standard in the early 1990's to develop a series of model plants for each process (hard chromium electroplating, decorative chromium electroplating, and chromium anodizing). We used theoretical emissions estimates for the model plants to represent actual facilities in operation. As we have collected much more data on actual emissions from facilities currently in operation, we now realize that the emission estimates based on pre-MACT data used for the October proposal significantly overestimated emissions. In addition, we modeled all of the unknown facilities (i.e., the facilities where we did not know the type of plating) using the hard chromium electroplating emission factor developed from the model plants. Since hard chromium electroplating facilities have the highest emissions among the three source categories this resulted in very conservative estimates of emissions for those unknown sources.

The list of plants in our current data set much better reflects the current status of the industry. First, it better reflects the status because we have greatly improved the locations of several hundred plants, which is critical in assessing risk. Second, the emissions data in the current data set better reflect actual emissions from facilities currently in operation because it reflects emission levels since implementation of the NESHAP.

In addition, having more accurate data on such things as the emission controls in use, the number of affected electroplating and anodizing tanks, tank operating parameters, facility types, stack parameters (such as exhaust flow rates), and other information allowed us to better estimate current nationwide emissions and the cost and environmental impacts associated with the control options. More details on the data collection activities for this supplemental proposal are provided in the technical document “Information on Chromium Electroplating Facilities Collected from State and Local Agencies from January to March 2011,” which is available in the docket for this action. Additional details on the industry data collected are provided in the technical document "Profile of

Chromium Electroplating Processes and Emissions," which is available in the docket for this action.

2. Steel Pickling Source Category. We had sufficient emissions data for this source category at the time of the October 21, 2010 proposal for the risk analysis. Nevertheless, subsequent to the close of the comment period, we gathered more data and information regarding the status of facility processes and controls, and we further evaluated the MACT rule to determine if any updates or corrections would be appropriate.

III. Analyses Performed

A. How did we perform the technology review?

For our October 2010 proposal, we performed several activities for purposes of evaluating developments in practices, processes, and control technologies for the chromium electroplating source categories: (1) we reviewed comments received on the proposed 2002 amendments to the Chromium Electroplating NESHAP (67 FR 38810, June 5, 2002) to determine whether they identified any developments that warranted further consideration; (2) we reviewed the supporting documentation for the 2007 amendments to California's Airborne Toxic Control Measure (ATCM) for Chromium Plating and Chromium Anodizing Facilities; and (3) we searched the RACT/BACT/LAER Clearinghouse (RBLC) and the Internet to identify other practices, processes, or control technologies that could be applied to chromium electroplating.

The October 21, 2010 proposal of the Chromium Electroplating NESHAP identified four developments in practices, processes, and control technologies that were considered for the technology review: emission elimination devices, high efficiency particulate air (HEPA) filters, wetting agent fume suppressants (WAFS), and housekeeping practices. These technologies and practices are described in detail in the October 2010 proposal. Furthermore, our initial analyses, findings, and conclusions regarding these developments are discussed in the preamble to the October 2010 proposal. The following paragraphs describe additional analyses that were performed for today's supplemental proposal.

1. Emissions Limits

a. Large Hard Chromium Electroplating. Most large hard chromium facilities currently have one or more add-on control devices such as packed bed scrubbers (PBS), composite mesh pad (CMP) scrubbers, mesh pad mist eliminators (MPMEs), high efficiency scrubbers, or HEPA filters. Some facilities use add-on controls plus WAFS to limit emissions. However, some facilities control their emissions using only WAFS and have no add-on control device.

To evaluate how effective the emission control technologies currently used on existing large hard chromium electroplating sources are in reducing emissions and meeting the emissions limit, we compiled the available data on emission concentration (mg/dscm) we collected from the 24 State and local agencies and ranked the data from lowest to highest. We have data from 75 tanks located at 38 facilities. We then reviewed the data to better understand where existing sources operated with respect to the emissions limit. That is, we looked at the number of sources that operated at or below various emission levels, including 75 percent of the emissions limit, 50 percent of the emissions limit, and 40 percent of the emissions limit.

The data indicate that most of these sources operate well below the 0.015 mg/dscm emissions limit. For example, approximately 88 percent of existing sources operate at less than 75 percent of the emissions limit (i.e., below 0.011 mg/dscm); 72 percent of sources operate at less than 50 percent of the emissions limit (i.e., below 0.0075 mg/dscm); and about 67 percent of existing large hard chromium electroplating sources achieve emissions below 0.006 mg/dscm. We then considered several options for reducing the emissions and weighed the costs and emissions reductions associated with each option. Further discussion of these options and the proposed decisions are presented in section IV below.

For purpose of addressing new large chromium electroplating facilities, we considered the feasibility of a more stringent emissions limit. Specifically, we examined what emission level could be met using available add-on control devices (such as with a CMP, MPME, or high efficiency scrubber) or a combination of add-on controls (such as a CMP plus a HEPA filter or an MPME plus a HEPA filter) and the emissions concentrations that could be achieved by using a combination of add-on control technology and WAFS. The results of this analysis and the proposed decisions are described in section IV below.

b. Small Hard Chromium Electroplating. For small hard chromium electroplating facilities, we performed the same type of analyses described in the previous section for large hard chromium electroplating. In terms of emissions limits, the NESHAP distinguishes between existing facilities, which are subject to an emissions limit of 0.030 mg/dscm, and new facilities, which are subject to an emissions limit of 0.015 mg/dscm. We compiled and ranked the available data, which also indicate that the large majority of sources operate well below the current emissions limits. We have data on emissions concentrations for 73 tanks at 56 facilities located in States other than California which were used for this ranking. We estimate that there are a total of 414 small hard chromium plants located in States other than California. We estimate that there are a total of 450 plants nationwide, with about 36 plants located in California. We considered different options for reducing the emissions limits. We also considered removing the existing distinction between existing and new, as they are currently defined in the NESHAP, because many of the "new" facilities have been in operation for more than 17 years and we were considering proposing a more stringent new source standard for all sources. We evaluated the impacts, in terms of costs and emissions reductions, that would result for various potential proposed emissions limits at or below 0.015 mg/dscm. We did not evaluate potential limits greater than 0.015 mg/dscm since about one-third of the currently operating small hard chromium sources are already subject to an emissions limit of 0.015 mg/dscm. Specifically, we considered two main options: (1) propose that all small hard chromium electroplating facilities currently in operation meet an emissions limit of 0.015 mg/dscm, and (2) propose that all small hard chromium electroplating facilities currently in operation meet an emissions limit of 0.010 mg/dscm. The results of this analysis and the proposed decisions are described in section IV below.

We also considered revising the definition of new small hard chromium electroplating facilities, based on the proposal date for this action, and requiring those facilities to meet a more stringent emissions limit. The results of this analysis and the proposed decisions are described in section IV below.

c. Decorative Chromium Electroplating. For decorative chromium electroplating, we intended to perform analyses similar to that performed for hard chromium electroplating. However, the data set for decorative chromium electroplating was much smaller (e.g., 20 data points for decorative chromium electroplating vs. 75 data points for large hard chromium), and we did not think the data were adequate for considering several different emissions reductions options. The primary reason for the smaller data set is that the most commonly used method for controlling emissions from decorative chromium electroplating is adding WAFS to the electroplating tank bath. Since sources that use WAFS and comply with the surface tension limits are not required to conduct an emission test, there are limited test data available.

However, we did rank the available data on existing sources in the decorative chromium electroplating source category by emissions level to determine the typical level of emissions performance and range of performance among those sources to determine options for revising these limits. All the facilities for which we have data have emissions concentrations less than 0.007 mg/dscm (i.e., at least 30 percent below the applicable emissions limit of 0.010 mg/dscm). Further discussion of this analysis and the proposed decisions for existing and new decorative chromium electroplating sources are presented in section IV below.

d. Chromium Anodizing. In the case of chromium anodizing, we had only a single data point (0.0016 mg/dscm), which is significantly below the current emissions limit of 0.010 mg/dscm. However, we concluded that the data on decorative chromium electroplating was relevant to determining the feasible options for chromium anodizing. For one, many chromium anodizing sources (approximately 50 percent) are controlled using only WAFS. It was for this reason that the current NESHAP specifies the same emissions limits of 0.010 mg/dscm for both chromium anodizing and decorative chromium electroplating sources. In addition, chromium anodizing plants are comparable to decorative chromium electroplating plants with respect to the relative magnitude of chromium emissions. Finally, the feasibility and options for controlling emissions from chromium anodizing are similar to those for decorative chromium. Further discussion of this analysis and the proposed decisions for existing and new chromium anodizing sources are presented in section IV below.

2. Surface Tension Limits

The NESHAP provides that affected sources must either meet an emissions limit specified in the NESHAP or must maintain the surface tension in chromium electroplating or chromium anodizing tanks below one of two specified surface tension limits, depending on the type of instrument used to measure surface tension. Despite the fact that the emissions limits for the three chromium electroplating source categories differ, the surface tension limits in the current NESHAP are the same for all three source categories and are the same for existing and new sources, as follows: if a stalagmometer is used to measure surface tension, the surface tension limit is 45 dynes/cm, and, if a tensiometer is used, the surface tension limit is 35 dynes/cm. The available data, which are described in detail in the technical document “Development of Revised Surface Tension Limits for Chromium Electroplating and Anodizing Tanks Controlled with Wetting Agent Fume Suppressants,” which is available in the docket, indicate that maintaining the surface tension below these limits ensures that emissions are below 0.01 mg/dscm, which is the most stringent limit currently in the NESHAP.

As part of the information collection described in section II.E of this preamble, we obtained test data for several decorative and hard chromium electroplating sources controlled using only WAFS. These data on surface tension and emission concentration were evaluated to determine the relationship between emissions and surface tension. We analyzed these data to evaluate the feasibility of requiring lower surface tension limits and the corresponding emissions levels. Further details of this analysis and the results, and the proposed decisions based on this analysis, are presented below in section IV.A.

B. For purposes of this supplemental proposal, how did we estimate the risk posed by each of the three chromium electroplating source categories?

The EPA conducted a risk assessment that provided estimates of the maximum individual risk (MIR) posed by HAP emissions from sources in the source category and the hazard index (HI) for chronic exposures to HAP with the potential to cause noncancer health effects. The assessment also provided estimates of the distribution of cancer risks within the exposed populations, cancer incidence, and an evaluation of the potential for adverse environmental effects for each source category. The docket for this rulemaking contains the following document which provides more information on the risk assessment inputs and models: Residual Risk Assessment for the Chromic Acid Anodizing, Decorative Chromium Electroplating, and Hard Chromium Electroplating Source Categories. The methods used to assess risks are consistent with those peer-reviewed by a panel of the EPA's Science Advisory Board (SAB) in 2009 and described in their peer review report issued in 2010[1]; they are also consistent with the key recommendations contained in that report.

1. Estimating Actual Emissions

[1] U.S. EPA SAB. Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board with Case Studies – MACT I Petroleum Refining Sources and Portland Cement Manufacturing, May 2010.

As explained previously, the revised data set for the Chromium Electroplating NESHAP source categories includes significantly improved emissions data for many more plants than the data set used for the October 2010 proposal. However, to assess nationwide residual risk, it was still necessary to estimate emissions for much of the industry. Rather than estimate those emissions using the model plant approach used for the October 2010 proposal, we used a Monte Carlo procedure to simulate actual emissions for those plants for which actual emissions data were not available. The simulation model used the pool of available data on actual emissions concentrations, exhaust flow rates, and annual operating hours for each process type (hard chromium electroplating, decorative chromium electroplating, and chromium anodizing). Actual emissions data (lbs/yr) were fitted to a Weibull distribution and emissions for plants for which emissions were unknown were simulated using the actual data for each plant type. Because process-specific data were used to simulate emissions for each facility, it was necessary to identify the process type for each of the plants. Although the process type was known for many plants, it was unknown for a large number of other plants. By scaling up the data on known plants, and using other available data on the industry, the profile of the current chromium electroplating industry was estimated in terms of the number of each type of plant.

One of the primary goals in simulating actual annual emissions was to develop a data set of emissions estimates that best represents chromium electroplating plants operating in the U.S. For this reason, a distinction was made between chromium electroplating plants located in California and plants located elsewhere (i.e., the non-California plants). Because chromium electroplating plants located in California are subject to emissions limits that are significantly more stringent than the limits specified in the NESHAP, they typically use multiple emissions controls, including HEPA filters in many cases, to reduce emissions. Thus, emissions for California plants are not representative of emissions for non-California plants. For this reason, the data on California plants were not included in the data set used to simulate emissions for plants located in other States. However, the data on actual emissions from plants located in California were used to estimate emissions for other plants in California. Thus, we did not exclude the California data from the overall analysis; we treated the data from plants in California differently. (Additional details on the emissions data for the California plants are provided below.) Based on the total numbers of plants nationwide, plant types were randomly assigned to each of the unknown plants, while ensuring that the total numbers of each type of plants nationwide were preserved.

After assigning plant types, emissions for each plant was simulated 5,000 times using only the data for that specific type of plant (e.g., only data for small hard chromium electroplating plants were used to simulate emissions for a small hard chromium electroplating plant). Once all 5,000 simulations were completed, the mean of the simulated values for each plant was determined and that value was used to populate the risk modeling file on actual emissions.

Taking into account all of the new emissions data collected following the public comment period for the October 2010 proposal, plus the good quality emissions data collected previously, the data set included emissions estimates for a total of 301 plants. Of these, approximately 128 plants were located in California, and 173 plants were located in other States. A review of the data indicated that emissions for the California plants were significantly lower than emissions for the non-California plants. For example, emissions from the large hard chromium electroplating plants in California averaged 0.027 lbs/yr, whereas the average for the non-California large hard chromium plants was 2.62 lbs/yr. For small hard chromium electroplating, the California plants averaged 0.0095 lbs/yr and the non-California plants averaged 0.56 lbs/yr. For decorative chromium electroplating, the average emissions were 0.00042 lbs/yr (California) and 0.55 lbs/yr (non-California). For chromium anodizing, the average emissions were 0.00035 lbs/yr (California) and 0.46 lbs/yr (non-California). These results clearly indicated that the data for plants in California were not representative of plants located outside of California. For this reason, all subsequent analyses related to estimating emissions for plants located outside of California were performed using only data for non-California plants.

For the California plants we used the emissions estimates as reported. For all the plants outside of California, we used actual emissions estimates if they were available. For the other plants we used the simulation model described above to estimate emissions.

Overall, we believe that the resulting emissions simulated by the model are much more representative of actual emissions on average and also are more representative of the variability of emissions from plant to plant. Additional details on the simulation approach can be found in the emissions technical document “Simulation of Actual and Allowable Emissions for Chromium Electroplating Facilities," which is available in the docket for this rulemaking.

2. Estimating MACT-Allowable Emissions

To estimate allowable annual emissions (e.g., lbs/yr) for those plants for which actual emissions concentration data were available, we calculated the allowable annual emissions using the MACT emissions limit. In other words, we scaled up actual annual emissions for those plants using the ratio of the emissions concentration (measured during the performance test) to the MACT limit. For example, if the measured concentration for a large hard chromium plant was 0.0075 mg/dscm, which is one-half of the 0.015 mg/dscm emissions limit, we scaled up annual emissions by a factor or 2. For those plants for which we did not have actual emissions data, we used the same emissions simulation approach used to estimate actual emissions, as described previously. That is, data for California plants were excluded from the analysis; process types were assigned to each plant for which the process was unknown, while ensuring that the total number of each type of plant matched the estimated numbers of plants nationwide; and a Monte Carlo simulation model was developed using the pool of available data on emissions concentrations, exhaust flow rates, and annual operating hours for each process type to simulate allowable emissions for each plant. However, instead of using the actual emissions concentration data in the simulation model, we used the corresponding MACT emissions limit. Thus, we calculated the allowable emissions by using the pool of available data on exhaust flow rates and annual operating hours for each process type and assumed each source had emissions concentrations equal to the MACT emissions limit (i.e., we assumed they were emitting at the maximum level allowed by the MACT standard). For example, to estimate the allowable emissions for a large hard chromium electroplating plant, data on large hard chromium plant exhaust flow rates and annual operating hours were used, along with an emissions concentration of 0.015 mg/dscm, which is the emissions limit specified in the NESHAP for large hard chromium electroplating plants. As was used for calculating actual emissions estimates, 5,000 simulations were performed for each plant, and the average of simulated values was used to represent allowable emissions for the plant. Additional details on the simulation approach can be found in the emissions technical document "Simulation of Actual and Allowable Emissions for Chromium Electroplating Facilities," which is available in the docket for this rulemaking.

3. Conducting Dispersion Modeling, Determining Inhalation Exposures, and Estimating Individual and Population Inhalation Risks

Both long-term and short-term inhalation exposure concentrations and health risks from the three chromium electroplating source categories were estimated using the Human Exposure Model (HEM-3). The HEM-3 performs three of the primary risk assessment activities listed above: (1) conducting dispersion modeling to estimate the concentrations of HAP in ambient air, (2) estimating long-term and short-term inhalation exposures to individuals residing within 50 kilometers (km) of the modeled sources, and (3) estimating individual and population-level inhalation risks using the exposure estimates and quantitative dose-response information.

The air dispersion model used by the HEM-3 model (AERMOD) is one of the EPA's preferred models for assessing pollutant concentrations from industrial facilities.[2] To perform the dispersion modeling and to develop the preliminary risk estimates, HEM-3 draws on three data libraries. The first is a library of meteorological data, which is used for dispersion calculations. This library includes 1 year of hourly surface and upper air observations for approximately 200 meteorological stations, selected to provide coverage of the United States and Puerto Rico. A second library, of United States Census Bureau census block[3] internal point locations and populations, provides the basis of human exposure calculations (Census, 2010). In addition, for each census block, the census library includes the elevation and controlling hill height, which are also used in dispersion calculations. A third library of pollutant unit risk factors and other health benchmarks is used to estimate health risks. These risk factors and health benchmarks are the latest

[2] U.S. EPA. Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions (70 FR 68218, November 9, 2005).

[3] A census block is the smallest geographic area for which census statistics are tabulated.

values recommended by the EPA for HAP and other toxic air pollutants. These values are available at http://www.epa.gov/ttn/atw/toxsource/summary.html and are discussed in more detail later in this section.

In developing the risk assessment for chronic exposures, we used the estimated annual average ambient air concentrations of chromium emitted by each source. The air concentrations at each nearby census block centroid were used as a surrogate for the chronic inhalation exposure concentration for all the people who reside in that census block. We calculated the MIR for each facility as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week, and 52 weeks per year for a 70-year period) exposure to the maximum concentration at the centroid of inhabited census blocks. Individual cancer risks were calculated by multiplying the estimated lifetime exposure to the ambient concentration of chromium (in micrograms per cubic meter ($\mu g/m^3$)) by its unit risk estimate (URE), which is an upper bound estimate of an individual's probability of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic meter of air. For residual risk assessments, we generally use URE values from the EPA's Integrated Risk Information System (IRIS). For carcinogenic pollutants without the EPA IRIS values, we look to other reputable sources of cancer dose-response values, often using California EPA (CalEPA) URE values, where available. In cases where new, scientifically credible dose response values have been developed in a manner consistent with the EPA guidelines and have undergone a peer review process similar to that used by the EPA, we may use such dose-response values in place of, or in addition to, other values, if appropriate.

Incremental individual lifetime cancer risks were estimated as the sum of the risks for each of the carcinogenic HAP (including those classified as carcinogenic to humans, likely to be carcinogenic to humans, and suggestive evidence of carcinogenic potential[4]) emitted by the modeled source. Cancer incidence and the distribution of individual cancer risks for the population within 50 km of the sources were also estimated for the source category as part of this assessment by summing individual risks. A distance of 50 km is consistent with both the analysis supporting the 1989 Benzene NESHAP (54 FR 38044) and the limitations of Gaussian dispersion models, including AERMOD.

---

[4] These classifications also coincide with the terms "known carcinogen, probable carcinogen, and possible carcinogen," respectively, which are the terms advocated in the EPA's previous Guidelines for Carcinogen Risk Assessment, published in 1986 (51 FR 33992, September 24, 1986). Summing the risks of these individual compounds to obtain the cumulative cancer risks is an approach that was recommended by the EPA's Science Advisory Board (SAB) in their 2002 peer review of EPA's National Air Toxics Assessment (NATA) entitled, NATA - Evaluating the National-scale Air Toxics Assessment 1996 Data -- an SAB Advisory, available at: http://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/$File/ecadv02001.pdf.

To assess the risk of non-cancer health effects from chronic exposures, we summed the HQ for each of the HAP that affects a common target organ system to obtain the HI for that target organ system (or target organ-specific HI, TOSHI). The HQ is the estimated exposure divided by the chronic reference value, which is either the EPA reference concentration (RfC), defined as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime," or, in cases where an RfC from the EPA's IRIS database is not available, the EPA will utilize the following prioritized sources for our chronic dose-response values: (1) The Agency for Toxic Substances and Disease Registry Minimum Risk Level, which is defined as "an estimate of daily human exposure to a substance that is likely to be without an appreciable risk of adverse effects (other than cancer) over a specified duration of exposure"; (2) the CalEPA Chronic Reference Exposure Level (REL), which is defined as "the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration"; and (3), as noted above, in cases where scientifically credible dose-response values have been developed in a manner consistent with the EPA guidelines and have undergone a peer review process similar to that used by the EPA, we may use those dose-response values in place of or in concert with other values.

4. Conducting Multipathway Exposure and Risk Screening

As explained in the October 2010 proposal, chromium electroplating facilities do not emit any of the 14 PB-HAP compounds or compound classes identified for the multipathway screening in the EPA's Air Toxics Risk Assessment Library (available at http://www.epa.gov/ttn/fera/risk_atra_vol1.html). Because none of these PB-HAP are emitted by sources in the chromium electroplating source categories, we concluded at the time of the proposal that there is low potential for significant non-inhalation human or environmental risks for these source categories. The data we received since proposal continues to indicate that chromium electroplating sources do not emit any of those 14 PB-HAP compounds or compound classes.

5. Conducting Other Analyses: Facility-wide Risk Assessments and Demographic Analyses

a. Facility-wide Risk

To put the source category risks in context, we examined the risks from the entire "facility," where the facility includes all HAP-emitting operations within a contiguous area and under common control. In other words, for each facility that includes one or more sources from a source category under review, we examined the HAP emissions not only from that source category, but also emissions of HAP from all other emission sources at the facility. The emissions data for generating these "facility-wide" risks were obtained from the 2005 NEI. We analyzed risks due to the inhalation of HAP that are emitted "facility-wide" for the populations residing within 50 km of each facility, consistent with the methods used for the source category analysis described above. For these facility-wide risk analyses, the modeled source category risks were compared to the facility-wide risks to determine the portion of facility-wide risks that could be attributed to each of the three chromium electroplating source categories. We specifically examined the facility that was associated with the highest estimate of risk and determined the percentage of that risk attributable to the source category of interest. The risk documentation available through the docket for this action provides all facility-wide risks and the percentage of source category contribution for the three chromium electroplating source categories.

The methodology and results of the facility-wide analyses for each source category are included in the residual risk documentation as referenced in section IV of this preamble, which is available in the docket for this action.

b. Demographic Analysis

To examine the potential for any environmental justice (EJ) issues that might be associated with these source categories, we performed demographic analyses of the at-risk populations for two of the three chromium electroplating categories. We performed these analyses for only these two source categories because the chromium anodizing source category is not associated with significant populations with estimated cancer risks above 1 in a million. For the hard and decorative chromium electroplating source categories, we evaluated the percentages of different social, demographic and economic groups within the populations living near the facilities who were estimated to be subjected to cancer risks greater than 1 in a million due to HAP emissions from chromium electroplating. We compared the percentages of these demographic groups to the total percentages of those demographic groups nationwide. The methodology and results of the demographic analyses are included in the technical reports: "Risk and Technology Review – Analysis of Socio-Economic Factors for Populations Living Near Hard Chromium Electroplating Facilities"; and "Risk and Technology Review – Analysis of Socio-Economic Factors for Populations Living Near Decorative Chromium Electroplating Facilities." These reports are available in the docket for this action.

6. Considering Uncertainties in Risk Assessment

Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for the source category addressed in this supplemental proposal. Although uncertainty exists, we believe that our approach, which used conservative tools and assumptions, ensures that our decisions are health-protective. A brief discussion of the uncertainties in the emissions data set, dispersion modeling, inhalation exposure estimates and dose-response relationships follows below. A more thorough discussion of these uncertainties is included in the risk assessment documentation available in the docket for this action.

a. Uncertainties in the Emissions Data Set

Although the development of the RTR data sets involved quality assurance/quality control processes, the accuracy of emissions values will vary depending on the source of the data, the degree to which data are incomplete or missing, the degree to which assumptions made to complete the data sets are inaccurate, errors in estimating emissions values, and other factors.

The emission estimates considered in this analysis generally are annual totals for certain years that do not reflect short-term fluctuations during the course of a year or variations from year to year. Additionally, although we believe that we have good data for hundreds of facilities in these source categories in our RTR data set, our data set does not include data for many other existing facilities.

To simulate emissions estimates for plants for which we did not have actual emissions estimates, separate data sets were compiled for each process type: large hard chromium electroplating, small hard chromium electroplating, decorative chromium electroplating, and chromium anodizing. The data sets included combinations of actual data on emissions concentrations, exhaust flow rates, annual operating hours, and hourly emission rates. In addition, assumptions were used to fill in some of the data gaps. For example, if, for a specific facility, data on all parameters except exhaust flow rate were known, the exhaust flow rate was estimated using average flow rate data for other plants of similar process (e.g., large hard chromium electroplating). A similar procedure was used to estimate annual operating hours if all data except for annual operating hours were known. The relative sizes of the data sets used to simulate emissions also introduce various levels of uncertainty in the simulations: the smaller the data set, the greater the variability in the analysis, and the greater the uncertainty in the emissions estimates. For example, the data set for chromium anodizing was the smallest and, therefore, is expected to have the highest level of uncertainty; the data set for large hard chromium electroplating was the largest and is expected to have the lowest degree of uncertainty in the emissions simulations.

Moreover, even after collecting the additional information, we still had many sources in our data set for which we did not know the type of facility (e.g., hard chromium electroplating, decorative chromium electroplating, or chromium anodizing). To assign source types to these unknown sources for the model input file, we first determined the percent of each of the type of sources among the sources for which we have data, then we assumed that the remaining unknown sources (those for which we did not know the source type) would comprise the same percentages for each type. Finally, we randomly assigned a source type to each unknown plant based on these percentages. For further details on these data, the simulation approach, and the associated uncertainties, see the technical document "Simulation of Actual and Allowable Emissions for Chromium Electroplating Facilities," which is available in the docket.

In terms of speciation, it was assumed that emissions from all chromium electroplating sources consisted of 98 percent hexavalent chromium and 2 percent trivalent chromium. The actual speciation of chromium in exhaust streams may vary slightly from source to source. However, historical data indicate that emissions from chromium electroplating sources are almost entirely comprised of hexavalent chromium, and the 98%/2% assumed speciation was believed to be representative of sources on average.

b. Uncertainties in Dispersion Modeling

While the analysis employed the EPA's recommended regulatory dispersion model, AERMOD, we recognize that there is uncertainty in ambient concentration estimates associated with any model, including AERMOD. In circumstances where we had to choose between various model options, where possible, model options (e.g., rural/urban, plume depletion, chemistry) were selected to provide an overestimate of ambient air concentrations of the HAP rather than underestimates. However, because of practicality and data limitation reasons, some factors (e.g., meteorology, building downwash) have the potential in some situations to overestimate or underestimate ambient impacts. For example, meteorological data were taken from a single year (1991) and facility locations can be a significant distance from the site where these data were taken.

c. Uncertainties in Inhalation Exposure

The effects of human mobility on exposures were not included in the assessment. Specifically, short-term mobility and long-term mobility between census blocks in the modeling domain were not considered.[5] The assumption of not considering short or long-term population mobility does not bias the

[5] Short-term mobility is movement from one micro-environment to another over the course of hours or days. Long-term mobility is movement from one residence to another over the course of a lifetime.

estimate of the theoretical MIR, nor does it affect the estimate of cancer incidence because the total population number remains the same. It does, however, affect the shape of the distribution of individual risks across the affected population, shifting it toward higher estimated individual risks at the upper end and reducing the number of people estimated to be at lower risks, thereby increasing the estimated number of people at specific high risk levels (e.g., one in 10,000 or one in one million).

In addition, the assessment predicted the chronic exposures at the centroid of each populated census block as surrogates for the exposure concentrations for all people living in that block. Using the census block centroid to predict chronic exposures tends to over-predict exposures for people in the census block who live farther from the facility and under-predict exposures for people in the census block who live closer to the facility. Thus, using the census block centroid to predict chronic exposures may lead to a potential understatement or overstatement of the true maximum impact, but is an unbiased estimate of average risk and incidence.

The assessment evaluates the cancer inhalation risks associated with pollutant exposures over a 70-year period, which is the assumed lifetime of an individual. In reality, both the length of time that modeled emissions sources at facilities actually operate (i.e., more or less than 70 years), and the domestic growth or decline of the modeled industry (i.e., the increase or decrease in the number or size of United States facilities), will influence the future risks posed by a given source or source category. Depending on the characteristics of the industry, these factors will, in most cases, result in an overestimate both in individual risk levels and in the total estimated number of cancer cases. However, in rare cases, where a facility maintains or increases its emissions levels beyond 70 years, residents live beyond 70 years at the same location, and the residents spend most of their days at that location, then the risks could potentially be underestimated. Annual cancer incidence estimates from exposures to emissions from these sources would not be affected by uncertainty in the length of time emissions sources operate.

The exposure estimates used in these analyses assume chronic exposures to ambient levels of pollutants. Because most people spend the majority of their time indoors, actual exposures may not be as high, depending on the characteristics of the pollutants modeled. For many of the HAP, indoor levels are roughly equivalent to ambient levels, but for very reactive pollutants or larger particles, these levels are typically lower. This factor has the potential to result in an overstatement of 25 to 30 percent of exposures.[6]

In addition to the uncertainties highlighted above, there are several factors specific to the acute exposure assessment that should be highlighted. The accuracy of an acute inhalation exposure assessment depends on the simultaneous occurrence of independent factors that may vary greatly, such as hourly emissions rates, meteorology, and human activity patterns. In this assessment, we assume that individuals remain for 1 hour at the point of maximum ambient concentration as determined by the co-occurrence of peak emissions and worst-case meteorological conditions. These assumptions would tend to be worst-case actual exposures as it is unlikely that a person would be located at the point of maximum exposure during the time of worst-case impact.

d. Uncertainties in Dose-Response Relationships

There are uncertainties inherent in the development of the dose-response values used in our risk assessments for cancer effects from chronic exposures and non-cancer effects from both chronic and acute exposures. Some uncertainties may be considered quantitatively, and others generally are expressed in qualitative terms. We note as a preface to this discussion a point on dose-response uncertainty that is brought out in the

[6] U.S. EPA. National-Scale Air Toxics Assessment for 1996. (EPA 453/R-01-003; January 2001; page 85.)

EPA's 2005 Cancer Guidelines; namely, that "the primary goal of EPA actions is protection of human health; accordingly, as an Agency policy, risk assessment procedures, including default options that are used in the absence of scientific data to the contrary, should be health protective" (EPA 2005 Cancer Guidelines, pages 1–7). This is the approach followed here, as summarized in the next several paragraphs. A complete detailed discussion of uncertainties and variability in dose-response relationships is given in the residual risk documentation which is available in the docket for this action.

Cancer URE values used in our risk assessments are those that have been developed to generally provide an upper bound estimate of risk. That is, they represent a "plausible upper limit to the true value of a quantity" (although this is usually not a true statistical confidence limit).[7] In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.[8] When developing an upper bound estimate of risk and to provide risk values that do not underestimate risk, health-protective default approaches are generally used. To err on the side of ensuring adequate health protection, the EPA typically uses the upper bound estimates

---

[7] IRIS glossary (http://www.epa.gov/NCEA/iris/help_gloss.htm).

[8] An exception to this is the URE for benzene, which is considered to cover a range of values, each end of which is considered to be equally plausible, and which is based on maximum likelihood estimates.

rather than lower bound or central tendency estimates in our risk assessments, an approach that may have limitations for other uses (e.g., priority-setting or expected benefits analysis).

Chronic non-cancer reference concentration (RfC) and reference dose (RfD) values represent chronic exposure levels that are intended to be health-protective levels. Specifically, these values provide an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure (RfC) or a daily oral exposure (RfD) to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. To derive values that are intended to be "without appreciable risk," the methodology relies upon an uncertainty factor (UF) approach, (U.S. EPA, 1993, 1994) which considers uncertainty, variability and gaps in the available data. The UF are applied to derive reference values that are intended to protect against appreciable risk of deleterious effects. The UF are commonly default values,[9] e.g., factors of 10 or 3, used in

[9] According to the NRC report, Science and Judgment in Risk Assessment (NRC, 1994) "[Default] options are generic approaches, based on general scientific knowledge and policy judgment, that are applied to various elements of the risk assessment process when the correct scientific model is unknown or uncertain." The 1983 NRC report, Risk Assessment in the Federal Government: Managing the Process, defined default option as "the option chosen on the basis of risk assessment policy that appears to be the best choice in the absence of data to the contrary" (NRC, 1983a, p. 63). Therefore, default options are not rules that bind the Agency; rather, the Agency may depart

the absence of compound-specific data; where data are available, UF may also be developed using compound-specific information. When data are limited, more assumptions are needed and more UF are used. Thus, there may be a greater tendency to overestimate risk in the sense that further study might support development of reference values that are higher (i.e., less potent) because fewer default assumptions are needed. However, for some pollutants, it is possible that risks may be underestimated.

While collectively termed "UF," these factors account for a number of different quantitative considerations when using observed animal (usually rodent) or human toxicity data in the development of the RfC. The UF are intended to account for: (1) variation in susceptibility among the members of the human population (i.e., inter-individual variability); (2) uncertainty in extrapolating from experimental animal data to humans (i.e., interspecies differences); (3) uncertainty in extrapolating from data obtained in a study with less-than-lifetime exposure (i.e., extrapolating from sub-chronic to chronic exposure); (4) uncertainty in extrapolating the observed data to obtain an estimate of the exposure associated with no adverse effects; and

---

from them in evaluating the risks posed by a specific substance when it believes this to be appropriate. In keeping with EPA's goal of protecting public health and the environment, default assumptions are used to ensure that risk to chemicals is not underestimated (although defaults are not intended to overtly overestimate risk). See EPA, 2004, An Examination of EPA Risk Assessment Principles and Practices, EPA/100/B-04/001 available at: http://www.epa.gov/osa/pdfs/ratf-final.pdf.

(5) uncertainty when the database is incomplete or there are problems with the applicability of available studies.

IV. Analytical Results and Proposed Decisions for the Three Chromium Electroplating Source Categories

A. What are the results and proposed decisions based on our technology review?

1. Emissions Limits for Large Hard Chromium Electroplating

a. Emissions Limits for Existing Large Hard Chromium Sources. As mentioned above, the available data from 75 tanks located at 38 facilities outside of California indicate that approximately 88 percent of existing large hard chromium electroplating sources located outside of California have emissions levels that are less than 75 percent of the current emissions limit (i.e., below 0.011 mg/dscm); 72 percent of these sources emit at less than 50 percent of the emissions limit (i.e., below 0.0075 mg/dscm); and about 60 percent of these sources achieve emissions below 0.006 mg/dscm. There are an additional 17 facilities located in California, which on average have considerably lower emissions compared to plants in other States. These findings demonstrate that the add-on emission control technologies and/or the fume suppressants used by the majority of facilities in this source category are very effective in reducing chromium emissions and that most facilities have emissions well below the current limit.

We considered three options to lower the emissions limit. Table 2 summarizes the emissions, costs, and cost effectiveness for these options, which are described further in the following paragraphs.

TABLE 2. SUMMARY OF OPTIONS CONSIDERED FOR POTENTIAL REVISED EMISSIONS LIMITS FOR LARGE HARD CHROMIUM ELECTROPLATING FACILITIES

Option	No. of Plants Affected	Emissions Reductions, lbs/yr	Capital Costs,$	Annualized Costs, $/yr	Cost Effectiveness, $/lb
Reduce emissions limit to 0.011 mg/dscm	41	121	$1,821,000	$2,196,000	$18,100
Reduce emissions limit to 0.0075 mg/dscm	76	169	$2,847,000	$4,182,000	$24,700
Reduce emissions limit to 0.006 mg/dscm	97	180	$3,414,000	$5,368,000	$29,900

The first option considered was to propose that large hard chromium electroplating plants meet an emissions limit of 0.011 mg/dscm, which is equivalent to a 25 percent reduction of the current emission limit. The second option evaluated was a limit of 0.006 mg/dscm since this is the level that would be equivalent to the concentration that can be achieved (based on the 99 percent upper tolerance limit) when WAFS are used to control emissions and the surface tension in the affected chromium electroplating tank is maintained at the level of the proposed revised surface tension limits (described in section IV.A.5). Finally, as a third option, we selected an emissions limit of 0.0075 mg/dscm for large hard chromium electroplating plants to provide an intermediate option that is more stringent than the first option of 0.011 mg/dscm, but less stringent than the second option of 0.006 mg/dscm.

As noted above, we considered the option of lowering the current emissions limit by 25 percent, which would result in a limit of 0.011 mg/dscm. Under this option, we estimate that 26 plants (11 percent of the total plants nationwide) would need to reduce emissions to comply with this option because they have emissions above 0.011 mg/dscm. We also assume that an additional 15 plants (6 percent) that have emissions close to this level (i.e., have emissions concentrations greater than 0.009 mg/dscm) would likely need to make adjustments and reduce emissions to ensure continuous compliance with a limit of 0.011 mg/dscm. Therefore, overall we estimate that 41 of the existing large hard chromium facilities (about 18 percent of the total) would reduce emissions in order to ensure compliance with a new emissions limit of 0.011 mg/dscm. We assume that most of these 41 facilities would achieve these extra reductions with the addition of fume suppressants. The available data, which are described in the technical document “Development of Revised Surface Tension Limits for Chromium Electroplating and Anodizing Tanks Controlled with Wetting Agent Fume Suppressants,” indicate that about 15 percent of sources in the large hard chromium electroplating industry outside of California use fume suppressants to supplement the level of control achieved by an add-on control device; for facilities located in California the percentage is even higher. However, we also assume that some facilities would need to install new add-on control devices or retrofit their existing controls to meet the proposed limit. The only costs for the other 192 facilities (82 percent of the total) would be testing and/or monitoring costs.

Based on this analysis, we estimate that the total estimated capital costs for all large hard chromium electroplating sources to comply with this option (i.e., a limit of 0.011 mg/dscm) and conduct the necessary testing and monitoring would be $1.8 million and the average capital costs per facility across all facilities would be $8,300. The estimated range of capital costs per plant would be from $0 to $180,000. The total annualized costs would be an estimated $2.2 million, which includes the costs for controls (WAFS and add-on controls) plus testing. The average annual cost per facility across all facilities would be about $10,000. The annualized costs per facility range from $0 to $55,000. We estimate that these requirements would reduce emissions of chromium (mainly hexavalent chromium) by 121 pounds per year (lbs/yr), and that the cost-effectiveness would be $18,100 per pound. The cost estimates for the WAFS accounts for the potential for slightly higher costs for non-PFOS WAFS compared to PFOS-based WAFS and includes a conservative assumption that the costs for non-PFOS WAFS will be 15 percent higher than the costs for PFOS-based

WAFS. The use of non-PFOS WAFS to limit surface tension is described further in section IV.A.5 below. More information about the estimates of costs and reductions and how they were derived are provided in the technical support document "Procedures for Determining Control Costs and Cost Effectiveness for Chromium Electroplating Supplemental Proposal", which is available in the docket for this action.

Another option considered was to lower the current emissions limit by 50 percent, which would result in a limit of 0.0075 mg/dscm. Under this option, and using a similar assumption (as that used above) that facilities with emissions close to this level (i.e., with emissions greater than 0.006) would make adjustments and reduce emissions to ensure compliance with the revised limit, we estimate that 76 of the existing large hard chromium facilities (about 33 percent of the total) would reduce emissions in order to ensure compliance with an emissions limit of 0.0075 mg/dscm. This would include the approximately 28 percent of sources not currently meeting this limit, as well as sources (approximately 5 percent) that are currently measuring close to this limit and that would likely need to make adjustments to ensure continuous compliance with a limit of 0.0075 mg/dscm. We assume that most of these 76 facilities would achieve these extra reductions with the addition of fume suppressants. However, we also assume that some facilities would need to install new add-on control devices or retrofit their existing controls to meet the limit.

Based on this analysis, we estimate that the total estimated capital costs for all large hard chromium electroplating sources to comply with this second option (i.e., a limit of 0.0075 mg/dscm) and conduct the necessary testing and monitoring would be about $2.8 million, and the average capital costs per facility across all facilities would be about $12,000. The total annualized costs are estimated to be about $4.2 million, and the estimated average annual cost per facility across all facilities would be about $19,000. We estimate that these requirements would reduce emissions by 169 lbs/yr, and that the cost-effectiveness would be about $24,700 per pound. Moreover, the incremental cost-effectiveness (i.e., the increased costs per pound that result from increasing the level of stringency from option 1 to option 2) is estimated to be about $41,800 per pound. This option would also result in more facilities needing to install or retrofit add-on controls and would have more significant impacts on small businesses compared to the first option discussed above.

We also considered the option of lowering the limit by 60 percent, which would result in a limit of 0.006 mg/dscm. The option of reducing the emissions limit to 0.006 mg/dscm was evaluated because that concentration is equivalent to the concentration that can be achieved when WAFS are used to control emissions and the surface tension in the affected chromium electroplating tank is maintained at levels consistent with the surface tension limits that are being proposed in this action (as described in section IV.A.5). However, the number of facilities affected, the cost-effectiveness, and incremental cost-effectiveness were significantly higher than the estimated costs and impacts for the two options presented above (as shown in Table 2), and would result in greater economic impacts to small businesses.

We made the decision to consider more stringent emissions limits than the limit in the current NESHAP primarily because the revised data set indicated that most facilities were operating well below the current emissions limit. This indicated that more stringent emissions limits could be implemented without significant economic burden to the industry.

After considering the three options described above for reducing the emissions limit and after weighing the costs and emissions reductions associated with each option, we are proposing to reduce the emissions limit for affected tanks located at existing large hard chromium electroplating facilities to 0.011 mg/dscm. We conclude this emissions limit would achieve significant reductions in emissions at a reasonable cost. This option results in reductions from about 18 percent of the facilities. We project that these facilities would generally be the higher emitting facilities since they would be the facilities with emissions concentrations at the upper end (above 0.009 mg/dscm) compared to other facilities; therefore, this lower limit will achieve significant reductions. We did not choose the other options for a number of reasons, including the following: those options would pose greater economic burden, would be less cost effective, would have significantly higher incremental cost-effectiveness, would have higher total annualized costs and higher average costs per facility, would impact substantially more facilities, and would result in greater impacts to a greater number of small businesses.

Nevertheless, as an alternative to meeting the proposed emissions limits, we are proposing to allow existing large hard chromium electroplating facilities to meet the surface tension limits that are also being proposed in this action. The proposed surface tension limits would be 40 dynes/cm, if measured using a stalagmometer, and 33 dynes/cm, if measured using a tensiometer. Section IV.A.5 of this preamble discusses the analyses performed and the basis for these proposed surface tension limits. As described in section IV.A.5 of this preamble, we conclude that maintaining surface tension at this level would reflect a level of emissions that is lower than the emissions limit (of 0.011

mg/dscm) proposed above.

b. Compliance Testing and Monitoring. To demonstrate compliance, we are proposing that each facility would need to provide a new or previous performance stack emissions test that is representative of current operations and current controls and is conducted at the exit of the control device to show they are in compliance with the emissions limit. Or, as an alternative, facilities could demonstrate compliance with the MACT standard by monitoring surface tension and demonstrate that they maintain the surface tension below the proposed limits of 40 dynes/cm, if measured with a stalagmometer, and 33 dynes/cm, if measured with a tensiometer.

c. Estimated Costs and Impacts for Existing Large Hard Chromium Facilities for the Proposed Option. We estimate that 41 of the existing large hard chromium facilities (about 18 percent of the total) would reduce emissions in order to ensure compliance with a new emissions limit of 0.011 mg/dscm. This would include the approximately 11 percent not currently meeting this limit, as well as sources (approximately 6 percent) that are currently measuring close to this limit and that would likely need to make adjustments to ensure continuous compliance with the proposed 0.011 mg/dscm level. We assume that most of these 41 facilities would achieve these extra reductions with the addition of fume suppressants. However, we also assume that some facilities would need to install new add-on control devices or retrofit their existing controls to meet the limit. We estimate that 27 plants would be required only to conduct performance tests; and the remaining plants would not be required to test or add additional controls.

Based on this analysis, we estimate that the total estimated capital costs for all large hard chromium electroplating sources to comply with the revised limits and conduct the necessary testing and monitoring is estimated to be $1.8 million and the average capital costs per facility across all facilities are $8,300. The total annualized costs are estimated to be $2.2 million, and the average annual cost per facility across all facilities is estimated to $10,000. The range for annualized costs per facility range from $0 to $57,000. These costs include the costs for controls (WAFS and add-on controls) plus testing. We estimate these requirements will reduce chromium emissions (mainly hexavalent chromium) by 121 pounds per year, and that the cost-effectiveness would be $18,100 per pound. We conclude that these costs (e.g., total capitol and annualized costs, and the costs per plant) and the cost effectiveness are reasonable, particularly since hexavalent chromium is a known human carcinogen.

d. Emissions Limits for New Large Hard Chromium Sources. We also considered options for a more stringent emissions limit for new sources. In doing so, we recognized the need to re-define "new source" to help clarify which facilities would be subject to the new source standards being proposed in this action. For purposes of the revisions to the NESHAP being proposed, a new facility would be one that commences construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. All other sources are considered existing facilities for purposes of these proposed amendments.

In evaluating options for a more stringent emissions limit for new large hard chromium electroplating facilities, we considered the emissions concentrations that could be achieved using available add-on control devices (such as with a CMP, MPME or high efficiency scrubber) or a combination of add-on controls (such as a CMP plus a HEPA filter or an MPME plus a HEPA filter) and the emissions concentrations that could be achieved using WAFS. To analyze the level of emissions that can be achieved with add-on controls, we evaluated available data on the emissions concentrations that are achieved by existing hard chromium electroplating facilities that have various add-on controls or combinations of controls. Based on our analysis, we conclude that the best available control technology configurations, such as CMP plus a HEPA filter, a MPME plus a HEPA filter, or a high efficiency scrubber, can achieve emissions concentrations of approximately 0.003 mg/dscm or lower. We also considered the costs associated with each of these types of control configurations. We estimate that the capital cost to install a CMP plus a HEPA filter for a new large hard chromium source is about $306,400 and that the annualized costs would be $109,300/yr. We also estimate that the capital and annualized costs for the other comparable control technology configurations would be no greater than these. We conclude that these costs are reasonable for new sources that choose one of these combinations of add-on controls to minimize emissions.

Nevertheless, as discussed in section IV.A.5 of this preamble, maintaining affected tanks below the proposed surface tension limits, which would be a cost-effective compliance option for new large hard chromium sources, would limit chromium emissions concentrations to less than 0.006 mg/dscm. The combination of add-on controls described above (e.g., CMP plus HEPA filter or an MPME plus HEPA filter or a high efficiency scrubber) can reliably achieve emissions of 0.003 mg/dscm or lower at a reasonable cost for those new sources that choose to use these add-on controls to comply with the NESHAP instead of WAFS. The available data indicate that all existing hard chromium electroplating sources that use these add-on controls (e.g., CMP plus HEPA filter or an MPME plus HEPA filter) achieve emissions of 0.003 mg/dscm or lower, well below 0.006 mg/dscm. Moreover, based on the data that we have, 60 percent of all existing large hard chromium facilities already achieve emissions below 0.006 regardless of the type of controls they use. For example, many facilities that only have a CMP alone (without the HEPA filter) have emissions below 0.006 mg/dscm. Therefore, we conclude that some new facilities may be able to achieve emissions below 0.006 mg/dscm with only a CMP, which would be lower costs than those costs mentioned above for the combination of controls. Taking into account an allowance for variability in emission testing and control device performance for those sources that comply using add-on controls, and to provide new facilities the flexibility to use WAFS to minimize emissions to comply with the emissions limit as an alternative to add-on controls, we are proposing an emissions limit of 0.006 mg/dscm for new sources. That is, we are proposing to require affected tanks at new large hard chromium electroplating facilities to meet an emissions limit of 0.006 mg/dscm.

Today's action would also allow new large hard chromium electroplating sources the option of meeting the proposed surface tension limits (40 dynes/cm by stalagmometer and 33 dynes/cm by tensiometer) as an alternative to the proposed emissions limit of 0.006 mg/dscm.

2. Emissions Limits for Small Hard Chromium Electroplating

a. Emissions Limits for Small Hard Chromium Sources. As we did for large hard chromium electroplating, described above to evaluate possible options to reduce the emissions limits, we compiled and ranked the available data, which indicate that more than 80 percent of the currently operating small hard chromium electroplating sources have emissions concentrations below the current emissions limit for new small hard chromium electroplating sources (i.e., 0.015 mg/dscm). We have such data for 73 tanks at 56 facilities located in States other than California. We estimate that there are a total of 450 small hard chromium plants in the U.S., with 36 of those plants located in California and 414 plants located in other States. The plants located in California have considerably lower emissions on average compared to plants in other States. We evaluated three possible options for a more stringent standard for these small hard chromium electroplating sources, considering the costs and emissions reductions that would be achieved under each of these options. Table 3 summarizes the emissions reductions, costs, and cost effectiveness associated with these options.

TABLE 3. SUMMARY OF OPTIONS CONSIDERED FOR POTENTIAL REVISED EMISSIONS LIMITS FOR SMALL HARD CHROMIUM ELECTROPLATING FACILITIES

Option	No. of Plants	Emissions Reductions, lbs/yr	Capital Costs,$	Annualized Costs, $/yr	Cost Effective ness, $/lb
Reduce emissions limit to 0.015 mg/dscm					
Existing Small Hard Chromium	85	41	$1,445,000	$652,000	$15,800
Reduce emissions limit to 0.010 mg/dscm					
Existing Small Hard Chromium	140	64	$2,447,000	$1,225,000	$19,200
New* Small Hard Chromium	34	7	$571,000	$243,000	$36,000
Reduce emissions limit to 0.006 mg/dscm					

Existing Small Hard Chromium	171	81	$3,161,000	$1,585,000	$19,700
New* Small Hard Chromium	80	35	$1,268,000	$653,000	$18,800

* The term "new" as used in this table refers to sources subject to the new source limit in the current NESHAP (i.e., sources that were constructed or reconstructed after December 16, 1993).

The first option evaluated was to require existing small hard chromium electroplating plants to meet the emissions limit currently required for new small hard chromium electroplating plant (i.e., 0.015 mg/dscm). As described above, the current NESHAP (promulgated in 1995), includes a limit of 0.03 for existing sources and a limit of 0.015 for new sources (those constructed or reconstructed after December 16, 1993). We decided that it was appropriate to evaluate this option since many small hard chromium plants (those constructed or reconstructed since December 16, 1993) are already subject to this limit and because the vast majority of currently operating small hard chromium plants are achieving emissions at or below this level.

We also considered a more stringent option of proposing a limit of 0.006 mg/dscm for the same reason described previously for large hard chromium electroplating. That is, an emissions limit of 0.006 mg/dscm would be equivalent to the concentration that can be achieved when WAFS are used to control emissions and the surface tension in the affected chromium electroplating tank is maintained by the revised limits that are being proposed in this action.

Finally, as a third option, we evaluated a possible emissions limit of 0.010 mg/dscm for small hard chromium electroplating plants to provide an intermediate option that is more stringent than the first option of 0.015 mg/dscm, but less stringent than the second option of 0.006 mg/dscm. These options are described in more detail in the following paragraphs.

As noted above, the first option we considered was to propose that all currently operating small hard chromium facilities meet the new source limit in the current NESHAP (i.e., 0.015 mg/dscm). Under this option, we estimate that 55 plants (12 percent of the total small hard chromium plants nationwide) would need to reduce emissions to comply with this option because they have emissions at or above 0.015 mg/dscm. We also assume that an additional 30 plants (7 percent) that have emissions close to this level (i.e., have emissions concentrations greater than 0.012 mg/dscm) would likely need to make adjustments and reduce emissions to ensure continuous compliance with a limit of 0.015 mg/dscm. Under this option we estimate that 85 small hard chromium facilities (about 19 percent of the total) would reduce emissions. We assume that most of these 85 facilities would achieve these extra reductions with the addition of fume suppressants. However, we also assume that some facilities would need to install new add-on control devices or retrofit their existing controls to meet the limit.

The total estimated capital costs for all small hard chromium electroplating sources to comply with this option and conduct the necessary testing and monitoring would be $1.45 million, and the average capital costs per facility across all facilities would be $5,300. The total annualized costs are estimated to be $650,000, and the average annual cost per facility across all facilities is $2,400. These costs include the costs for controls (WAFS and add-on controls) plus testing. The annualized costs per facility are estimated to range from $0 to $22,000 per year. We estimate that this option would reduce chromium emissions by 41.3 pounds per year, and that the cost-effectiveness would be $15,800 per pound. More information about the estimates of costs and reductions and how they were derived are provided in the technical document "Procedures for Determining Control Costs and Cost Effectiveness for Chromium Electroplating Supplemental Proposal", which is available in the docket for this action.

Another option evaluated was to lower the limit for existing and new sources to 0.01 mg/dscm. Under this option we estimate that 174 small hard chromium facilities (about 39 percent of the total) would need to reduce emissions. We assume that most of these 174 facilities would achieve these extra reductions with the addition of fume suppressants. However, we also assume that several facilities would need to install new add-on control devices or retrofit their existing controls to meet the limit.

The total estimated capital costs for all small hard chromium electroplating sources to comply with this option and conduct the necessary testing and monitoring would be $3.02 million and the average capital costs per facility across all facilities would be $17,400. The total annualized costs are estimated to be about $1.47 million, and the average annual cost per facility across all facilities would be about $8,400. We estimate that this option would reduce emissions by 71 pounds per year, and that the cost-effectiveness would be about $20,700 per pound. Moreover, the incremental cost-effectiveness (i.e., the increased costs per pound that result from increasing the level of stringency from option 1 to option 2) is estimated to be about $27,000 per pound. This option would also result in more facilities needing to install or retrofit add-on controls and would have more significant impacts on small businesses compared to option 1.

We also considered the more stringent option of lowering the limit to 0.006 mg/dscm, which would be consistent with the emissions that can be achieved using WAFS and maintaining the surface tension below the limit being proposed in this action. However, the number of facilities affected, the cost-effectiveness, and incremental cost-effectiveness were significantly higher than the estimated costs and impacts for the two options presented above (as indicated in Table 3), and would result in greater economic impacts to small businesses.

After considering the impacts of these three options, we are proposing to reduce the emissions limit for existing small hard chromium electroplating sources to 0.015 mg/dscm, which is equal to the MACT limit we established for new small hard chromium electroplating sources when we first promulgated the NESHAP (60 FR 4963, January 25, 1995).

As an alternative to meeting the proposed emissions limits, we are proposing to allow existing small hard chromium electroplating facilities to meet the surface tension limits that are also being proposed in this action. The proposed surface tension limits would be 40 dynes/cm, if measured using a stalagmometer, and 33 dynes/cm, if measured using a tensiometer. Section IV.A.5 of this preamble discusses the analyses performed and the basis for these proposed surface tension limits. As described in section IV.A.5 of this preamble, we conclude that maintaining surface tension at this level would reflect a level of emissions that is lower than the emissions limit (of 0.015 mg/dscm) proposed above.

b. Compliance Testing and Monitoring. To demonstrate compliance, we are proposing that each facility would need to provide a new or previous performance stack emissions test that is representative of current operations and current controls and is conducted at the exit of the control device to show they are in compliance with the emissions limit. Or, as an alternative, facilities can demonstrate compliance with the MACT standard by monitoring surface tension and demonstrate that they maintain the surface tension below the proposed limits of 40 dynes/cm, if measured with a stalagmometer, and 33 dynes/cm, if measured with a tensiometer.

c. Estimated Costs and Impacts for Small Hard Chromium Facilities.

We estimate that 85 small hard chromium facilities (about 19 percent of the total) would reduce emissions to ensure compliance with the proposed limit. We assume that most of these 85 facilities would achieve these extra reductions with the addition of fume suppressants. However, we also assume that some facilities would need to install new add-on control devices or retrofit their existing controls to meet the limit. We estimate that 26 plants would be required only to conduct performance tests; and the remaining plants would not be required to test or add additional controls.

The total estimated capital costs for all small hard chromium electroplating sources to comply with the proposed revised limits and conduct the necessary testing and monitoring is estimated to be $1.45 million and the average capital costs per facility are $5,300. The total annualized costs are estimated to be $650,000, and the average annual cost per facility is $2,400. We estimate that these requirements will reduce chromium emissions by 41.3 pounds per year, and that the cost-effectiveness would be $15,800 per pound. We conclude that these costs (e.g., total capital and annualized costs, and the costs per plant) and the cost effectiveness are reasonable, particularly since hexavalent chromium is a known human carcinogen.

d. Emissions Limits for New Small Hard Chromium Sources.

For new small hard chromium facilities, we considered options for a more stringent emissions limit based on the same type of analysis described above for large hard chromium electroplating sources. As is the case for large hard chromium electroplating, we are also proposing to re-define new source as those sources, the construction or reconstruction of which commenced after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

For the reasons described previously (in section IV.A.1.d) for large hard chromium electroplating facilities, we are proposing to require new small hard chromium electroplating facilities, to limit emissions from affected tanks to 0.006 mg/dscm. Those reasons include the findings that add-on controls (such as a CMP plus HEPA filter) or WAFS can achieve this level of emissions at new hard chromium sources for a reasonable cost.

We estimate that installing a combination of CMP with HEPA filter on a new small hard chromium electroplating source would result in capital costs of $127,000 and annualized costs of $45,000 per year. Furthermore, we believe that sources could meet this level with other control configurations or with WAFS alone for lower costs. We conclude that any new source should be able to achieve this level of performance with typical add-on control devices or with use of WAFS.

Today's action would also allow new small hard chromium electroplating sources the option of meeting the proposed surface tension limits (40 dynes/cm by stalagmometer and 33 dynes/cm by tensiometer) as an alternative to the proposed emissions limit of 0.006 mg/dscm.

3. Decorative Chromium Electroplating.

a. Emissions Limits for Existing and New Sources. As described above, the current emissions limit for decorative chromium electroplating is 0.010 mg/dscm. We reviewed the available data on existing sources in the decorative chromium electroplating source category to determine the typical level of emissions performance and range of performance among those sources to assess options for revising the current limit. We also reviewed the available data on surface tension levels and the relationship of surface tension to emissions concentrations since most decorative chromium electroplating tanks rely primarily or entirely on WAFS to limit emissions. WAFS are the most common method for limiting emissions from these facilities.

With regard to emissions concentration data, we have data from 20 tanks at 17 facilities. Based on these data, the emissions concentrations from these 20 tanks are all less than 0.007. The highest value is 0.0066 mg/dscm. Two of these tanks (about 11 percent) have emissions between 0.006 to 0.0066. All the other tanks in this data set (about 89 percent) have emissions concentrations below 0.006 mg/dscm. Some tanks have emissions much lower than 0.006 mg/dscm.

With regard to our analysis of surface tension and its relationship with emissions concentrations, as described in section IV.A.5 below (and in more details in the "Development of Revised Surface Tension Limits for Chromium Electroplating and Anodizing Tanks Controlled with Wetting Agent Fume Suppressants," which is available in the docket for this action), we conclude that maintaining surface tension to 40 dynes/cm (as measured by a stalagmometer) and 33 dynes/cm (as measured with a tensiometer) in decorative chromium electroplating baths would maintain emissions below 0.006 mg/dscm.

After reviewing these data and evaluating various regulatory options, we are proposing to lower the limit for existing decorative electroplating tanks to 0.007 mg/dscm, which would be a 30 percent reduction from the current limit of 0.01 mg/dscm. Our general approach to choosing this option was similar to that explained previously for hard chromium electroplating. On the one hand, the available data indicate that most decorative chromium electroplating sources have emissions well below the current emissions limit of 0.010 mg/dscm. As noted above, all sources in our data set have emissions concentrations below 0.007 mg/dscm. Thus, we concluded that a more stringent limit could achieve reductions in emissions, particularly in terms of allowable emissions, without imposing a significant burden on the industry. On the other hand, the large majority of decorative chromium electroplating tanks are controlled with WAFS, and the available surface tension data indicate that emissions from these source are in the range of 0.004 to 0.006 mg/dscm (as described further in section IV.A.5). We considered this concentration range as a lower bound to what could reasonably be required. Therefore, we decided to select an option between 0.006 and 0.01 mg/dscm for further evaluation. Subsequently, we chose to evaluate 0.007 mg/dscm for this thorough evaluation since this is the upper end of the emissions levels for sources in our data set.

Although all facilities in our data set that use an add-on control device have emissions below 0.007 mg/dscm, we realize that some sources (an estimated 8 facilities) currently have emissions relatively close to this limit and therefore would likely need to make adjustments and achieve reductions to ensure continuous compliance with the proposed 0.007 mg/dscm level. Based on the available emissions concentration data, we estimate that about 8 facilities may need to reduce emissions to ensure compliance with this limit. (See the technical support document "Procedures for Determining Control Costs and Cost Effectiveness for Chromium Electroplating Supplemental Proposal" which is available in the docket for more details). However, it is important to note that sources would have the choice to comply with the standard either by demonstrating emissions are less than 0.007 mg/dscm (with a stack test), or by maintaining surface tension below 40 dynes/cm (as measured by a stalagmometer) or 33 dynes/cm (as measured with the tensiometer), as described further in section IV.A.5 below. We believe that most of the decorative chromium facilities would choose this surface tension compliance approach.

Nevertheless, we estimate that by lowering the limit to 0.007 mg/dscm (and recognizing that plants would have the option to demonstrate compliance by meeting the surface tension limits), the total capital costs for all decorative chromium electroplating facilities to comply with this option and to conduct all the necessary testing and monitoring would be $183,000, and the average capital costs per facility would be

$400. The total annualized costs are estimated to be $189,000, and the average annual cost per facility is $390. We estimate that this option would reduce emissions by 39 pounds per year, and that the cost-effectiveness would be $4,800 per pound.

We also considered other options, but we concluded that proposing a limit of 0.007 was the most appropriate option. Therefore, we are proposing an emissions limit of 0.007 mg/dscm for existing decorative chromium electroplating sources. We conclude that this lower proposed limit would likely require no costs for add-on controls for these sources since all facilities for which we have data are already performing below this level with their current controls and that all the other facilities (that may need to achieve reductions) will do so by adding fume suppressants rather than installing add-on controls or retrofitting their existing controls.

This limit of 0.007 mg/dscm would apply to any affected decorative chromium electroplating source that is controlled with an add-on emission control device and chooses to demonstrate compliance with a stack emissions test.

As an alternative to meeting the proposed emissions limit, we are proposing to allow existing decorative chromium electroplating facilities to meet the surface tension limits that are also being proposed in this action. The proposed surface tension limits would be 40 dynes/cm, if measured using a stalagmometer, and 33 dynes/cm, if measured using a tensiometer. Section IV.A.5 of this preamble discusses the analyses performed and the basis for these proposed surface tension limits. As described in section IV.A.5 of this preamble, we conclude that maintaining surface tension at this level would reflect a level of emissions that is lower than the emissions limit (of 0.007 mg/dscm) proposed above.

With regard to new sources, we are proposing to require new decorative chromium electroplating tanks meet an emissions limit of 0.006 mg/dscm, consistent with the proposed new source limit for hard chromium electroplating sources. As explained previously, the available data indicate that chromium electroplating plants that use WAFS to control emissions and maintain the surface tension below the proposed limits would meet an emissions concentration of 0.006 mg/dscm. Furthermore, the data used to develop these revised surface tension limits indicate that WAFS are equally effective in controlling emissions from hard chromium electroplating tanks and from decorative chromium electroplating tanks. In addition, the available data indicate that over 80 percent of existing decorative chromium electroplating plants with add-on controls already meet this proposed new source emissions limit. Therefore, new facilities should be able to achieve this level of emissions at relatively low costs by using WAFS or with the type of add-on control devices used by existing facilities in this source category. As an alternative, we are proposing that new sources can demonstrate compliance with the MACT standards by maintaining surface tension limits of 40 dynes/cm, if measured by stalagmometer, and 33 dynes/cm, if measured by tensiometer.

As is the case for hard chromium electroplating, today's action would re-define new sources to clarify which emissions limits would apply to a specific facility.

b. Compliance Testing and Monitoring.

To demonstrate compliance, we are proposing that each decorative chromium electroplating source that uses an add-on control device to control emissions from affected tanks and chooses to comply with the proposed emissions limit, rather than the surface tension limits, would need to provide a new or previous performance stack emissions test that is representative of current operations and current controls and is conducted at the exit of the control device to show they are in compliance with the emissions limit. Facilities that elect the alternative option to comply with the surface tension limits would be required to monitor surface tension, as currently required by the NESHAP.

c. Costs and Impacts for Decorative Chromium Electroplating.

The total estimated capital costs for all decorative chromium electroplating facilities to comply with these proposed revised standards (i.e., lower surface tension limits or lower emissions limits) and to conduct all the necessary testing and monitoring is estimated to be $183,000, and the average capital costs per facility are $400. The total annualized costs are estimated to be $189,000, and the average annual cost per facility across all facilities is $390. The range for annualized costs per facility are from $0 to $4,200. We estimate that these requirements will reduce emissions by 39 pounds per year, and that the cost-effectiveness would be $4,800 per pound.

4. Chromium Anodizing.

a. Emissions Limits for Existing and New Chromium Anodizing Sources. As discussed in section III.B.1.d. of this preamble, although we did not have the data to perform a detailed analysis of options for chromium anodizing sources, there is a basis for concluding that the same emissions limits being proposed for decorative chromium electroplating would also be appropriate for chromium anodizing sources. In terms of relative magnitude of emissions, the types of emission controls commonly used, and the emissions limits in the current NESHAP, these two source categories are similar. With regard to emissions levels, based on the available data, the average emissions from chromium anodizing plants are about 20 percent lower than the average emissions from decorative electroplating plants, with an average of about 0.46 pounds per year per facility for anodizing plants and 0.57 pounds per year per plant for decorative chromium electroplating. With regard to controls, the majority of chromium anodizing and decorative chromium electroplating plants rely partly or entirely on WAFS to limit emissions. Moreover, the tank sizes are similar, with an average of about 1,020 gallons per tank for decorative chromium electroplating plants and 1,380 gallons per tank for chromium anodizing plants. Overall, we conclude that chromium anodizing plants should be able to limit emissions just as effectively and to the same level as the decorative plants, primarily using WAFS, for about the same costs. Consequently, we are proposing the same emissions limits for new and existing chromium anodizing sources as are being proposed for decorative chromium electroplating sources. That is, we are proposing that existing chromium anodizing sources would have to meet an emissions limit of 0.007 mg/dscm, and new sources would have to meet an emissions limit of 0.006 mg/dscm. Sources would also have the option of meeting the proposed surface tension limits as an alternative to meeting the proposed emissions limits. As is the case for hard chromium electroplating, today's action would re-define new sources to clarify which emissions limits would apply to a specific facility. Nevertheless, since we have very limited data on chromium anodizing plants, we specifically request comments on these proposed limits and we seek data and information on emissions from these chromium anodizing sources, including emissions test results, emissions concentration data, mass rate emissions (e.g., lbs per year), flow rates, and other emissions release information.

b. Compliance Testing and Monitoring. To demonstrate compliance, we are proposing that each chromium anodizing facility that uses an add-on control device to control emissions from affected tanks and chooses to comply with the proposed emissions limit, rather than the surface tension limits, would need to provide a new or previous performance stack emissions test that is representative of current operations and current controls and is conducted at the exit of the control device to show they are in compliance with the emissions limit. Facilities that elect the alternative option to comply with the surface tension limits would be required to monitor surface tension, as currently required by the NESHAP.

c. Costs and Impacts for Chromic Acid Anodizing.

To meet the proposed lower emissions limits and/or the lower surface tension limits, we conservatively assume that about 50 percent of facilities will need to use additional WAFS, which would result in increased annualized costs. Since emissions are already quite low for these facilities, we assume that no facilities will need to install add-on controls to meet the lower limits. Therefore, the only capital costs will be costs for testing.

The total estimated capital costs for all chromic acid anodizing facilities to comply with the revised limits, which is completely for testing and monitoring, is estimated to be $245,000 and the average capital costs per facility are $1,700. The total annualized costs, which include costs for WAFS and annualized costs for testing and monitoring, are estimated to be $54,000 and the average annual cost per facility across all facilities is $370. The range for annualized costs per facility are from $0 to $2,600. We estimate that these requirements will reduce emissions by 6 pounds per year, and that the cost-effectiveness would be $9,100 per pound. More information about the estimates of costs and reductions and how they were derived are provided in the technical support document "Procedures for Determining Control Costs and Cost Effectiveness for Chromium Electroplating Supplemental Proposal," which is available in the docket for this action.

5. Surface Tension Limits

As described in section III.A.2 of this preamble, the available data on surface tension and emission concentration were evaluated in terms of upper tolerance limits (UTLs) to help us better understand the relationship between surface tension and emissions. As a first step, we categorized the data according to the type of instrument used (stalagmometer or tensiometer). We discarded any data for which we could not identify the measurement instrument.

We analyzed the data for the purpose of developing tolerance limits that could be used to establish emissions concentrations for specified surface tension values. Statistical tolerance limits are limits within which a stated proportion of the population is expected to lie. The UTL represents the value below which it can be expected that the specified percentage of the measurements would fall for the specified level of confidence in repeated sampling. For example, the 95 percent UTL with 99 percent confidence level is the value for which we can conclude with 99 percent certainty or confidence that at least 95 percent of the data points lie below. We used this UTL approach in our analysis at these percent values (i.e., the 95 percent UTL with 99 percent confidence level).

To determine the UTL for various surface tension limits, we divided the surface tension data into intervals that had enough data points to calculate the mean and standard deviation. Separate data sets and intervals were determined for surface tension measurements using stalagmometers and for measurements using tensiometers. We then applied a statistical procedure to develop UTLs for each surface tension interval. We evaluated the results to determine appropriate intervals (i.e., surface tension limits) that would be achievable from a process operating perspective and would achieve significant reductions in chromium emissions. We used these surface tension limits as the basis for our proposed decisions regarding surface tension. These proposed decisions are described previously in sections IV.A.1 through IV.A.4. The results of the UTL analysis indicate that maintaining the surface tension below 40 dynes/cm, as measured using a stalagmometer, would limit emissions to no more than 0.0055 mg/dscm; and maintaining the surface tension below 32.5 dynes/cm, as measured using a tensiometer, would limit emissions to no more than 0.0047 mg/dscm. Recognizing that these instruments measure surface tension in integer increments, we rounded the tensiometer limit to 33 dynes/cm and concluded that maintaining these two surface tension limits (40 dynes/cm by stalagmometer and 33 dynes/cm by tensiometer) in chromium electroplating and anodizing baths would maintain emissions below 0.006 mg/dscm. Additional details on the analysis of the surface tension data can be found in the technical memorandum, "Development of Revised Surface Tension Limits for Chromium Electroplating and Anodizing Tanks Controlled with Wetting Agent Fume Suppressants," which is available in the docket for this action.

Based on available data, many facilities that currently use

WAFS already achieve surface tensions well below these levels (i.e., 40 dynes/cm and 33 dynes/cm), and based on available information, we conclude that other facilities can easily achieve these levels with a relatively small increase in the use of fume suppressants. Therefore, as an alternative to meeting the proposed emissions limits, we are proposing to allow new and existing sources in all three source categories (hard chromium electroplating, decorative chromium electroplating, and chromium anodizing) that use WAFS to comply with the NESHAP to meet these proposed lower surface tension limits (40 dynes/cm as measured with a stalagmometer and 33 dynes/cm as measured with a tensiometer).

As mentioned above, in the October 21, 2010 Federal Register notice (75 FR 65068), we proposed phasing out the use of wetting agent fume suppressants (WAFS) that contain perfluorooctyl sulfonates (PFOS). Based on available information, we continue to believe that non-PFOS WAFS are available that can effectively limit surface tension for about the same costs as PFOS-based WAFS, and that these non-PFOS WAFS can achieve surface tension levels below the proposed surface tension limits (described above).[10,11] However, to be

---

[10] Barlowe, G. and Patton, N., 2011. “Non-PFOS, Permanent Mist Suppressants for Hard Chromium Plating, Decorative Chromium Plating and Chromic Etch Applications”. March 1, 2011.

[11] Danish, EPA. 2011. Substitution of PFOS for use in non-decorative hard

conservative, we have assumed that the costs for non-PFOS WAFS will be 15 percent higher than the PFOS based WAFS and these additional costs have been included in the costs presented in today’s notice. More information about the cost estimates for WAFS and how they were derived are provided in the technical support document “Procedures for Determining Control Costs and Cost Effectiveness for Chromium Electroplating Supplemental Proposal,” which is available in the docket for this action.

We are not re-opening the comment period on the proposed phase out of the use of PFOS-based WAFS. However, we are soliciting comment and data on whether the proposed surface tension limits can be met through the use of non-PFOS WAFS. We seek data and information on the type of WAFS used, what surface tensions have been achieved, what hexavalent chromium emissions reductions have been achieved, fume suppressant costs, and detailed information related to the feasibility of using different types of WAFS.

B. What are the results of the risk assessment?

1. Inhalation Risk Assessment Results

Table 4 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 4. CHROMIUM ELECTROPLATING AND ANODIZING INHALATION RISK ASSESSMENT RESULTS

---

chrome plating. Pia Brunn Poulsen, Lars K. Gram and Allan Astrup Jensen. Danish Environmental Protection Agency. Environmental Project No. 1371 2011.

Source Category	Number of Facilities[1]	Maximum Individual Cancer Risk (in 1 million)[2]		Population at risk ≥ 1-in-1 million[3]	Annual cancer incidence (cases per year)[3]	Maximum Chronic Non-cancer TOSHI[4]		Maximum Off-Site Acute Non-cancer HQ
		Actual Emissions Level	Allowable Emissions Level			Actual Emission Level	Allowable Emissions Level	
Hard Chromium Electro-plating	699	20	50	130,000	0.05	0.02	0.04	NA[5]
Decorative Chromium Electro-plating	577	10	70	43,000	0.02	0.008	0.06	NA[5]
Chromic acid Anodizing	179	5	60	5,000	0.003	0.004	0.05	NA[5]

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Based on actual emissions.
[4] Maximum TOSHI. The target organ with the highest TOSHI for these source categories is the respiratory system.
[5] NA = Not applicable. There are no HAP with acute dose-response benchmark values, so no acute HQ were calculated for these source categories.

As shown in Table 4, the results of the inhalation risk assessment for the hard chromium electroplating source category indicate the maximum lifetime individual cancer risk could be up to 20-in-1 million based on actual emission levels of hexavalent chromium, and the maximum chronic noncancer TOSHI value could be up to 0.02. The total estimated national cancer incidence from these facilities, based on actual emission levels, is 0.05 excess cancer cases per year, or one case in every 20 years. In addition, we note that approximately 1,100 people are estimated to have cancer risks greater than 10 in one million, and approximately 130,000 people are estimated to have risks greater than 1-in-1 million based on estimates of actual emissions. Based on allowable emission levels, the maximum lifetime individual cancer risk could be up to 50-in-1 million, and the maximum chronic noncancer TOSHI value could be up to 0.04. Hexavalent chromium, which is a known human carcinogen, is the only HAP emitted by these sources and the HAP driving all these risks.

The results of the inhalation risk assessment for the decorative chromium electroplating source category indicate the maximum lifetime individual cancer risk could be up to 10-in-1 million based on actual emission levels, and the maximum chronic noncancer TOSHI value could be up to 0.008. The total estimated national cancer incidence from these facilities, based on actual emission levels, is 0.02 excess cancer cases per year, or one case in every 50 years. In addition, we note that approximately 100 people are estimated to have cancer risks greater than 10 in one million, and approximately 43,000 people are estimated to have risks greater than 1-in-1 million based on estimates of actual emissions. Based on allowable emission levels, the maximum lifetime individual cancer risk could be up to 70-in-1 million, and the maximum chronic noncancer TOSHI value could be up to 0.06.

The results of the inhalation risk assessment for the chromic acid anodizing source category indicate the maximum lifetime individual cancer risk could be up to 5-in-1 million based on actual emission levels, and the maximum chronic noncancer TOSHI value could be up to 0.004. The total estimated national cancer incidence from these facilities, based on actual emission levels, is 0.003 excess cancer cases per year, or one case in every 333 years. In addition, we note that no people are estimated to have cancer risks greater than 10-in-1 million, and approximately 5,000 people are estimated to have risks greater than 1-in-1 million. Based on allowable emission levels, the maximum lifetime individual cancer risk could be up to 60-in-1 million, and the maximum chronic noncancer TOSHI value could be up to 0.05.

The cancer risk estimates for all of the chromium electroplating source categories, especially those based on actual emissions, are considerably different compared to the results that were presented in the initial RTR proposal on October 21, 2010, (75 FR 65071). The risks due to the estimates of actual emissions presented above are considerably lower than those presented in the October 21, 2010 proposal FR Notice for hard chromium and decorative chromium plants. However, the risks due to actual emissions for chrome anodizing are about the same as the October 2010 proposal. The revised estimated of risks based on allowable emissions presented above are lower for hard chromium, about the same for decorative, and considerably higher for anodizing plants compared to the October 2010 proposal. The main reason for the difference is that we have significantly improved data on emissions and facility characteristics for this supplemental proposal, and we used a different methodology to estimate emissions for facilities for which we had incomplete data. This improved data set is described further in section II.E of this preamble, and the methodology is described in section III.B.

For all three source categories, there were no reported emissions of PB-HAP, and chromium emissions are not known to have any associated adverse environmental impacts; therefore, we conclude there is low potential for human health multipathway risks or adverse environmental impacts. Also, because there are no HAP with acute dose-response benchmark values, no acute HQ were calculated for these source categories, and we believe that the potential for acute effects is low.

2. Facility-wide Risk Assessment Results

Table 5 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 5 of the "Residual Risk Assessment for the Chromic Acid Anodizing, Decorative Chromium Electroplating, and Hard Chromium Electroplating Source Categories" which is available in the docket for this rulemaking.

TABLE 5. CHROMIUM ELECTROPLATING AND ANODIZING FACILITY-WIDE RISK ASSESSMENT RESULTS

	Hard Chromium	Decorative Chromium	Chromium

Source Category	Electroplating	Electroplating	Anodizing
Number of facilities analyzed	699	577	179
Cancer Risk:			
Estimated maximum facility-wide individual cancer risk (in 1 million)	70	80	10
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0	0	0
Number of facilities at which the source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0	0	0
Number of facilities at which the source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	195	98	31
Chronic Noncancer Risk:			
Maximum facility-wide chronic noncancer TOSHI	2	7	0.1
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	1	2	0
Number of	0	0	0

facilities at which the source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more			

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the hard chromium electroplating MACT standards is estimated to be 70-in-1 million, based on actual emissions. Of the 699 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million or greater. There are 206 facilities with facility-wide MIR of 1-in-1 million or greater, of which 195 have hard chromium electroplating operations that contribute greater than 50 percent to the facility-wide risks. The facility-wide maximum individual chronic noncancer TOSHI value is estimated to be 2, based on actual emissions, and there is 1 facility with a facility-wide maximum individual chronic noncancer TOSHI value greater than 1. Hard chromium electroplating operations do not contribute greater than 50 percent to the facility-wide maximum chronic noncancer TOSHI value at any facility.

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the decorative chromium electroplating MACT standards is estimated to be 80-in-1 million, based on actual emissions. Of the 577 facilities included in this analysis, none have a facility-wide MIR of 100-

in-1 million or greater. There are 121 facilities with a facility-wide MIR of 1-in-1 million or greater, of which 98 have decorative chromium electroplating operations that contribute greater than 50 percent to the facility-wide risks. The facility-wide maximum individual chronic noncancer TOSHI value is estimated to be 7, based on actual emissions, and there are 2 facilities with facility-wide maximum individual chronic noncancer TOSHI values greater than one. Decorative chromium electroplating operations do not contribute greater than 50 percent to the facility-wide maximum chronic noncancer TOSHI value at any facility.

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the chromium anodizing MACT standards is estimated to be 10-in-1 million, based on actual emissions. Of the 179 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million or greater. There are 35 facilities with a facility-wide MIR of 1-in-1 million or greater, of which 31 have chromium anodizing operations that contribute greater than 50 percent to the facility-wide risks. The facility-wide maximum individual chronic noncancer TOSHI value is estimated to be 0.1.

3. Demographic Analysis Results

To examine the potential for any environmental justice (EJ) issues that might be associated with these source categories, we performed demographic analyses of the at-risk populations (i.e., the population with estimated lifetime cancer risks greater than or equal to 1-in-1 million due to emissions from chromium electroplaters) for two of the three chromium electroplating categories. The results of the demographic analyses are summarized in Table 6. These results, for various demographic groups, are based on the estimated risks from actual emissions levels for the population living within 50 km of the facilities.

Table 6. Hard and Decorative Chromium Electroplating Demographic Risk Analysis Results

	Nationwide	Hard Chromium Electroplating	Decorative Chromium Electroplating
		Population with Cancer Risk at or Above 1-in-1 Million	
Total Population	312,900,000	131,000	43,000
Race by Percent			
White	72	59	48
All Other Races	28	41	52
Race by Percent			
White	72	59	48
African American	13	21	21
Native American	1.1	0.8	0.8
Other and Multiracial	14	20	30
Ethnicity by Percent			
Hispanic	17	34	26
Non-Hispanic	83	66	74
Income by Percent			
Below Poverty Level	14	21	24
Above Poverty Level	86	79	76
Education by Percent			

Over 25 and without High School Diploma	10	27	24
Over 25 and with a High School Diploma	90	73	76

For hard chromium electroplating, the results indicate that there are approximately 131,000 people exposed to a cancer risk at or above 1-in-1 million due to emissions from the source category. For several demographic groups, the percentage of such groups in the at-risk population are higher than their respective nationwide percentages, including the African American, Other and Multiracial, Hispanic, Below the Poverty Level, and Over 25 without a High School Diploma demographic groups. These results indicate that these demographic groups carry the potential to be disproportionately exposed to emissions and risks from this source category. These groups therefore stand to benefit the most from the emission reductions achieved by this proposed rulemaking.

For decorative chromium electroplating, the results indicate that there are approximately 43,000 people exposed to a cancer risk at or above 1-in-1 million due to emissions from the source category. The percentages of the at-risk population in several demographic groups are higher than their respective nationwide percentages, including the African American, Other and Multiracial, Hispanic, Below the Poverty Level, and the Over 25 without a High School Diploma demographic groups. These results indicate that these demographic groups carry the potential to be disproportionately exposed to emissions and risks from this source category. These groups therefore stand to benefit the most from the emission reductions achieved by this proposed rulemaking.

C. What are our proposed decisions regarding risk acceptability and ample margin of safety?

1. Risk acceptability

As noted in the preamble of the October 2010 proposal (75 FR 65068), we weigh all health risk factors in our risk acceptability determination, including the MIR, the numbers of persons in various cancer and noncancer risk ranges, cancer incidence, the maximum noncancer HI, the maximum acute noncancer hazard, the extent of noncancer risks, the potential for adverse environmental effects, and risk estimation uncertainties (54 FR 38044, September 14, 1989).

For each of the three source categories, the risk analysis we performed indicates that the cancer risk to the individual most exposed due to actual emissions is well below 100-in-1 million (an MIR of 100-in-1 million is generally considered the upper limit of acceptable risk), and that the cancer incidence is less than 0.05 cases per year (about 1 case in every 20 years). These risks are due to hexavalent chromium emissions. Hexavalent chromium is classified as a known human carcinogen by U.S. EPA. While the potential cancer risks due to allowable emissions from each of the three chromium electroplating categories are higher, they are also less than 100-in-1 million (with the highest estimated MIR of 70-in-1 million for the decorative chromium electroplating category based on allowable emissions). Specifically, for hard chromium electroplating, the MIR due to actual emissions is estimated to be 20-in-1 million, and the cancer incidence is estimated to be 0.05 cases per year. The MIR due to allowable emissions from hard chromium electroplating facilities is estimated to be 50-in-1 million, and the cancer incidence is estimated to be 0.2. For decorative chromium electroplating, the MIR due to actual emissions is estimated to be 10-in-1 million, and the cancer incidence is estimated to be 0.02 cases per year. The MIR due to allowable emissions from decorative chromium facilities is estimated to be 70-in-1 million, and the cancer incidence is estimated to be 0.08. For chromium anodizing, the MIR due to actual emissions is estimated to be 5-in-1 million, and the cancer incidence is estimated to be 0.003 cases per year. The MIR due to allowable emissions from chromium anodizing facilities is estimated to be 60-in-1 million, and the cancer incidence is estimated to be 0.08.

Our analysis also indicates that chronic noncancer health risks, potential acute impacts of concern, multipathway health risks and environmental risks are all negligible due to both actual and allowable emissions for all three source categories.

Although the cancer risks are due to emissions of a known human carcinogen (hexavalent chromium), since the cancer MIRs due to actual emissions are well below 100-in-1 million, and because a number of the other risk metrics do not indicate high risk concerns, we are proposing to determine that the risks due to HAP emissions from each of the three source categories are acceptable.

We note that the results of our demographic analyses (which are presented above) for hard and decorative chromium electroplating indicate that certain minority groups and low-income populations may be disproportionately exposed to emissions from these categories and to any risks that may result due to these emissions because the communities most proximate to facilities within these categories have a higher proportion of these groups than the national demographic profile. We note that we did not identify any vulnerability or susceptibility to risks particular to minority and low income populations from pollutants emitted from this source category. The Agency has determined that the existing NESHAP for these source categories provides an acceptable level of risk for all proximate populations, including minority and low-income populations.

2. Ample margin of safety analysis

We next considered whether the existing MACT standard provides an ample margin of safety (AMOS). Under the ample margin of safety analysis, we evaluate the cost and feasibility of available control technologies and other measures (including the controls, measures, and costs reviewed under the technology review) that could be applied in each of the three source categories to further reduce the risks (or potential risks) due to emissions of HAP identified in our risk assessment, along with all of the health risks and other health information considered in the risk acceptability determination described above.

Based on the fact that we have determined the risks due to actual and allowable emissions associated with each of the three categories of sources subject to the Chromium Electroplating NESHAP to be acceptable, and after evaluating the costs and feasibility of possible options to reduce emissions in our technology review, we are proposing that the same emission and surface tension limits that we are proposing under section 112(d)(6) of the Clean Air Act, which are discussed previously in section IV.A of this preamble, will reduce health risks and provide an ample margin of safety to protect public health. As described below, these proposed actions will reduce the modeled estimated maximum individual cancer risks and the modeled population cancer risks for the three source categories. Specifically, under Section 112(f) of the Clean Air Act, we are proposing the following amendments to the NESHAP:

- Existing large hard chromium electroplating facilities would be required to meet an emissions limit of 0.011 mg/dscm or a surface tension limit of 40 dynes/cm, if measured by stalagmometer, or 33 dynes/cm, if measured by tensiometer;
- New large hard chromium electroplating facilities would be required to meet an emissions limit of 0.006 mg/dscm or a surface tension limit of 40 dynes/cm, if measured by stalagmometer, or 33 dynes/cm, if measured by tensiometer;
- Existing small hard chromium electroplating facilities would be required to meet an emissions limit of 0.015 mg/dscm or a surface tension limit of 40 dynes/cm, if measured by stalagmometer, or 33 dynes/cm, if measured by tensiometer;
- New small hard chromium electroplating facilities would be required to meet an emissions limit of 0.006 mg/dscm or a surface tension limit of 40 dynes/cm, if measured by stalagmometer, or 33 dynes/cm, if measured by tensiometer;
- Existing decorative chromium electroplating and chromium

anodizing facilities would be required to meet an emissions limit of 0.007 mg/dscm or a surface tension limit of 40 dynes/cm, if measured by stalagmometer, or 33 dynes/cm, if measured by tensiometer;

- New decorative chromium electroplating and chromium anodizing facilities would be required to meet an emissions limit of 0.006 mg/dscm or a surface tension limit of 40 dynes/cm, if measured by stalagmometer, or 33 dynes/cm, if measured by tensiometer.

These proposed amendments to the NESHAP would reduce the cancer risks due to emissions of hexavalent chromium from this industry for all populations, including minority and low-income populations. Specifically, we estimate that the MIR based on actual emissions for each of these categories would be reduced by 25 to 50 percent, and the MIR based on allowable emissions would also be reduced by 25 to 50 percent. Cancer incidence and the number of people exposed to risks greater than 1-in-1 million would also be reduced significantly, by about 25 to 50 percent each.

As described above, we estimate that the total estimated capital costs for all existing large hard chromium electroplating sources to comply with the proposed revised limits and conduct the necessary testing and monitoring would be $1.8 million. The total annualized costs are estimated to be

$2.2 million. We estimate that these proposed requirements would reduce chromium emissions by 121 pounds per year, and that the cost-effectiveness would be $18,100 per pound.

The total estimated capital costs for all existing small hard chromium electroplating sources to comply with the proposed revised limits and conduct the necessary testing and monitoring is estimated to be $1.45 million. The total annualized costs are estimated to be $652,000. We estimate that these proposed requirements would reduce chromium emissions by 41 pounds per year, and that the cost-effectiveness would be $15,800 per pound.

The total estimated capital costs for all existing decorative chromium electroplating facilities to comply with these proposed revised standards (i.e., lower surface tension limits or lower emissions limits) and to conduct all the necessary testing and monitoring is estimated to be $183,000. The total annualized costs are estimated to be $189,000. We estimate that these proposed requirements would reduce emissions by 39 pounds per year, and that the cost-effectiveness would be $4,800 per pound.

The total estimated capital costs for all existing chromic acid anodizing facilities to comply with the proposed revised limits and conduct the necessary testing and monitoring is estimated to be $245,000. The total annualized costs are estimated to be $54,000. We estimate that these proposed requirements would reduce emissions by 6 pounds per year, and that the cost-effectiveness would be $9,100 per pound.

We conclude that the costs for all four categories or subcategories described above are reasonable given the risk reductions that will be achieved.

Based on all the above information, we propose that the NESHAP as revised with these proposed requirements will provide an ample margin of safety to protect public health by lowering emission levels and reducing cancer risk for all populations, including minority and low-income populations.

D. Compliance Dates

We are proposing to require existing facilities to comply with the proposed revised emissions limits or revised surface tension requirements no later than 2 years after the date of publication of the final rule. We believe this much time is needed for facilities to determine if they meet the proposed emissions limits, which would likely required conducting an emissions test. Scheduling a compliance test, conducting the test, and receiving the results, could take as much as 4 to 6 months. At that time, affected facilities that do not meet the proposed emissions limit would have to perform an engineering analysis to determine the control options, decide on what additional controls are needed, send out a tender notice, evaluate the bids received, and contract the installation and testing of the new equipment. Since most chromium electroplating facilities do not have in-house engineering expertise, they would likely have to hire consultants to perform all of the above work, and that would add to the time required.

We are proposing that all new facilities (newly constructed or reconstructed) must comply with the proposed revised emissions limits or surface tension requirements upon startup. We are proposing to require compliance with the electronic reporting requirements, which are discussed in section VII below, upon promulgation of the final rule.

V. What Action are We Proposing for the Steel Pickling Source Category?

A. Elimination of an Alternative Compliance Option.

As a result of the review of the NESHAP, we are proposing the elimination of language in the NESHAP that allows HCl regeneration facilities to establish an alternative chlorine concentration standard for existing acid regeneration plants. The NESHAP currently allows the owner or operator to request approval for a source-specific standard based on the maximum design temperature and minimum excess air that allows production of iron oxide of acceptable quality if the source is unable to meet the otherwise applicable emissions limit for chlorine (Cl_2) of 6 parts per million by volume (ppmv) (40 CFR subpart CCC).

Upon review of this provision, we believe that it does not meet the requirements in section 112(d)(2) and (3) of the CAA. MACT standards for existing sources cannot be less stringent than the average emissions limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). This is referred to as the “MACT floor.” The promulgated standard in 40 CFR part 63, §63.1157(b)(2), subpart CCC, was established in compliance with EPA’s obligation to promulgate a standard representing the MACT floor. We do not have authority to allow a source to seek an alternative standard if such a source is unable to meet a standard which reflects the MACT floor level of control. Therefore, we are proposing to amend the NESHAP by removing the language in §63.1157(b)(2) that currently allows a source-specific standard for sources that demonstrate they are unable to meet the applicable standard and removing the methods for establishing a source-specific standard under §63.1161(c)(2) of the NESHAP. This action is being proposed under section 112(d)(2) and (3) of the CAA to ensure that the NESHAP is consistent with requirements of that section.

In addition to fulfilling the statutory requirements of Sections 112(d)(2) and (3), we note that this proposed action also will reduce the emissions of chlorine and HCl from this source category, resulting in a reduction of the Hazard Index (HI) from 2 due to HCl (that was presented in the October 21, 2010 proposal) to an HI of less than one. The one facility that posed the HI of 2 (in the October 21, 2010 proposal) will need to improve controls and reduce emissions by more than a factor of 2 to comply with this proposed action.

B. Compliance Dates

We are proposing that the amendments to §63.1157(b)(2) and §63.1161(c)(2) of the NESHAP would be effective upon promulgation of the final rule.

VI. What other actions are we proposing?

A. Electronic Reporting

EPA must have performance test data to conduct effective reviews of CAA sections 112 and 129 standards, as well as for many other purposes including compliance determinations, emission factor development, and annual emission rate determinations. In conducting these required reviews, EPA has found it ineffective and time consuming, not only for us, but also for regulatory agencies and source owners and operators, to locate, collect, and submit performance test data because of varied locations for data storage and varied data storage methods. In recent years, though, stack testing firms have typically collected performance test data in electronic format, making it possible to move to an electronic data submittal system that would increase the ease and efficiency of data submittal and improve data accessibility.

Through this proposal, EPA is presenting a step to increase the ease and efficiency of data submittal and improve data accessibility. Specifically, EPA is proposing that owners and operators of facilities in the Hard and Decorative Chromium Electroplating and Chromium Anodizing source categories and the Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants source categories submit electronic copies of required performance test reports to EPA's WebFIRE database. The WebFIRE database was constructed to store performance test data for use in developing emission factors. A description of the WebFIRE database is available at http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main.

As proposed above, data entry would be through an electronic emissions test report structure called the Electronic Reporting Tool (ERT). The ERT would generate an electronic report which would be submitted using the Compliance and Emissions Data Reporting Interface (CEDRI). The submitted report would be transmitted through EPA's Central Data Exchange (CDX) network for storage in the WebFIRE database making submittal of data very straightforward and easy. A description of the ERT can be found at http://www.epa.gov/ttn/chief/ert/index.html and CEDRI can be accessed through the CDX website (www.epa.gov/cdx).

The proposal to submit performance test data electronically to EPA would apply only to those performance tests conducted using test methods that will be supported by the ERT. The ERT contains a specific electronic data entry form for most of the commonly used EPA reference methods. A listing of the pollutants and test methods supported by the ERT is available at http://www.epa.gov/ttn/chief/ert/index.html. We believe that industry would benefit from this proposed approach to electronic data submittal. Having these data, EPA would be able to develop improved emission factors, make fewer information requests, and promulgate better regulations.

One major advantage of the proposed submittal of performance test data through the ERT is a standardized method to compile and store much of the documentation required to be reported by this rule. Another advantage is that the ERT clearly states what testing information would be required. Another important proposed benefit of submitting these data to EPA at the time the source test is conducted is that it should substantially reduce the effort involved in data collection activities in the future. When EPA has performance test data in hand, there will likely be fewer or less substantial data collection requests in conjunction with prospective required residual risk assessments or technology reviews. This would result in a reduced burden on both affected facilities (in terms of reduced manpower to respond to data collection requests) and EPA (in terms of preparing and distributing data collection requests and assessing the results).

State, local, and tribal agencies could also benefit from more streamlined and accurate review of electronic data submitted to them. The ERT would allow for an electronic review process rather than a manual data assessment making review and evaluation of the source provided data and calculations easier and more efficient. Finally, another benefit of the proposed data submittal to WebFIRE electronically is that these data would greatly improve the overall quality of existing and new emissions factors by supplementing the pool of emissions test data for establishing emissions factors and by ensuring that the factors are more representative of current industry operational procedures. A common complaint heard from industry and regulators is that emission factors are outdated or not representative of a particular source category. With timely receipt and incorporation of data from most performance tests, EPA would be able to ensure that emission factors, when updated, represent the most current range of operational practices. In summary, in addition to supporting regulation development, control strategy development, and other air pollution control activities, having an electronic database populated with performance test data would save industry, state, local, tribal agencies, and EPA significant time, money, and effort while also improving the quality of emission inventories and, as a result, air quality regulations.

VII. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected sources?

1. Chromium Electroplating and Chromium Anodizing.

For the proposed amendments to the Chromium Electroplating NESHAP, the affected sources are each hard chromium electroplating tank, each decorative chromium electroplating tank, and each chromium anodizing tank located at a facility that performs hard chromium electroplating, decorative chromium electroplating, or chromium anodizing.

2. Steel Pickling. For the proposed amendments to the Steel Pickling NESHAP, the affected sources are hydrochloric acid regeneration plants that are major sources of HAP.

B. What are the emission reductions?

1. Chromium Electroplating and Chromium Anodizing. Overall, the proposed amendments to the Chromium Electroplating NESHAP would reduce nationwide emissions of chromium compounds by an estimated 208 pounds per year (lbs/yr) from the current levels of 1,140 lbs/yr down to 930 lbs/yr. For large hard chromium electroplating, the proposed amendments would reduce chromium compound emissions by about 121 lbs/yr from 561 lbs/yr down to

440 pounds. For small hard chromium electroplating, the proposed amendments would reduce chromium compound emissions by an estimated 41 lbs/yr from 240 lbs/yr to 199 lbs/yr. For decorative chromium electroplating, the proposed amendments would reduce chromium compound emissions by an estimated 40 lbs/yr from 280 lbs/yr down to 240 lbs/yr. For chromium anodizing, the proposed amendments would reduce chromium compound emissions by about 6 lbs/yr from 66 lbs/yr down to 60 lbs/yr. The proposed amendments would have negligible impacts on secondary emissions because the additional control equipment that would be required would not significantly impact energy use by the affected facilities.

2. Steel Pickling. We estimate that the proposed amendment to remove the alternative compliance provision for hydrochloric acid regeneration facilities would reduce emissions of chlorine by 15 tpy.

C. What are the cost impacts?

1. Chromium Electroplating and Chromium Anodizing. We estimate that these proposed amendments would achieve 208 pounds reductions in hexavalent chromium emissions, and that the total capital and total annualized cost for the proposed amendments would be $3.7 million and $3.1 million/yr, respectively. The overall cost effectiveness would be $14,900 per pound of hexavalent chromium emissions reductions. A summary of the

estimated costs and reductions of hexavalent chromium emissions are shown in Table 7.

Table 7. Summary of the Estimated Costs, Reductions, and Cost Effectiveness for Proposed Requirements for Chromium Electroplating and Anodizing Source Categories.

Source Category or subcategory	Capital costs (controls + WAFS + all testing)	Annualized costs (controls + WAFS + all testing), $/yr	Emissions reductions (lbs/yr)	Cost Effectiveness ($/lb)
Large Hard Chromium Electroplating	$1,821,000	$2,195,000	121	$18,100
Small Hard Chromium Electroplating	$1,445,000	$653,000	41	$15,800
Decorative Chromium Electroplating	$183,000	$189,000	39	$4,800
Chromic Acid Anodizing	$245,000	$54,000	6	$9,100
Total	$3,694,000	$3,090,000	208	$14,900

2. Steel Pickling. For HCl acid regeneration plants, we estimate that the capital cost for the proposed amendments would be between $100,000 and $200,000, depending on whether the existing equipment can be upgraded or will need to be replaced. The annualized cost are estimated to be between $11,419 and $22,837 per year. The estimated cost effectiveness would be $761 to $1,522 per ton of HAP (mainly chlorine and HCl).

D. What are the economic impacts?

1. Chromium Electroplating and Chromium Anodizing

EPA performed a screening analysis for impacts on all affected small entities by comparing compliance costs to average sales revenues by employment size category.[12] This is known as the cost-to-revenue or cost-to-sales ratio, or the "sales test." The "sales test" is the impact methodology EPA primarily employs in analyzing small entity impacts as opposed to a "profits test," in which annualized compliance costs are calculated as a share of profits. The sales test is frequently used because revenues or sales data are commonly available for entities impacted by EPA regulations, and profits data normally made available are often not the true profit earned by firms because of accounting and tax considerations. The use of a "sales test" for estimating small business impacts for a rulemaking is consistent with guidance offered by EPA on compliance with SBREFA[13] and is consistent with guidance published by the U.S. SBA's Office of Advocacy that suggests that cost as a percentage of total revenues is a metric for evaluating cost increases on small entities in relation to increases on large entities (U.S. SBA, 2010).[14]

---

[12] http://www.census.gov/econ/susb/data/susb2002.html

[13] The SBREFA compliance guidance to EPA rulewriters regarding the types of small business analysis that should be considered can be found at: http://www.epa.gov/sbrefa/documents/Guidance-RegFlexAct.pdf. See Table 2 on page 36 for guidance on interpretations of the magnitude of the cost-to-sales numbers.

[14] U.S. SBA, Office of Advocacy. A Guide for Government Agencies, How to Comply with the Regulatory Flexibility Act, Implementing the President's Small Business Agenda and Executive Order 13272, June 2010.

Based on the analysis, we estimate that approximately 96 percent of all affected facilities have a cost-to-sales ratio of less than 1 percent. In addition, for approximately 1 percent of all affected facilities, or 9 facilities with fewer than 20 employees, the potential for cost-to-sales impacts may be between 3 and 8 percent. All of these facilities are in the hard chromium electroplating category, with 2 of the facilities in the small hard chromium electroplating category and 7 in the large hard chromium electroplating category. For these categories, because the average sales receipts used for the analysis may understate sales for some facilities and because these facilities are likely to be able to pass cost increases through to their customers, we do not anticipate the regulatory proposal to result in firm closures, significant price increases, or substantial profit loss. We conclude that this proposal will not have a significant economic impact on a substantial number of small entities. More information and details of this analysis are provided in the technical document "Economic Impact Analysis for Risk and Technology Review: Chromium Electroplating," which is available in the docket for this proposed rule.

2. Steel Pickling

Because only one of the approximately 100 facilities incurs any cost for controls and that cost is estimated to be less than

1 percent of sales, no significant price or productivity impacts are anticipated.

E. What are the benefits?

1. Chromium Electroplating and Chromium Anodizing

The estimated reductions in chromium emissions that will be achieved by this proposed rule will provide benefits to public health. The proposed limits will result in significant reductions in the actual and allowable emissions of hexavalent chromium therefore will reduce the actual and potential cancer risks due to emissions of chromium from this source category.

2. Steel Pickling

The estimated reductions in hydrogen chloride and chlorine emissions that will result from this proposed action will provide benefits to public health. The proposed limits will result in reductions in the potential for noncancer health effects due to emissions of these HAP.

VIII. Request for Comments

We are soliciting comments on all aspects of this proposed action. All comments received during the comment period will be considered. In EPA's strive to continue to promote sustainability in our protection of human health and the environment, we request comment on sustainability related to the types of fume suppressants and surfactants, depending on their chemical properties, which may have more or less potential for negative health and environmental impacts beyond the air emissions addressed by this supplemental proposal. In addition to general comments on this proposed action, we are also soliciting additional information and data (e.g., on emissions, emissions concentrations results from stack emissions tests, flow rates, facility parameters, facility types, controls, test reports, etc.) that may help to reduce the uncertainties inherent in the risk assessments and any additional data that would inform the other analyses described in this preamble (such as the analyses of the costs and reductions that would result from the proposed requirements). Because our current data set includes test results for only one chromium anodizing tank, we specifically request additional performance test data for chromium anodizing sources, including emissions concentration, exhaust flow rates, rectifier output, and control device type. Finally, we are requesting additional information on the costs and feasibility of using WAFS that do not contain PFOS to meet the proposed surface tension limits. Such data should include supporting documentation in sufficient detail to allow characterization of the quality and representativeness of the data or information. We are not re-opening the public comment period for the actions proposed in the October 21, 2010 notice.

IX. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and

Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a significant regulatory action because it raises novel legal and policy issues. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act.

The information collection requirements in this rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, et seq.

We are not proposing any new paperwork requirements to the Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants MACT standards. Revisions and burden associated with amendments to the Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks are discussed in the following paragraphs. The OMB has previously approved the information collection requirements contained in the existing regulation being amended with this proposed rule (i.e., 40 CFR part 63, subparts N and CCC) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501, et seq. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. Burden is defined at 5 CFR 1320.3(b).

The ICR document prepared by EPA for the amendments to the Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks NESHAP has been assigned EPA ICR number 1611.08. Burden changes associated with these amendments would result from the emission testing requirements and compliance demonstrations being proposed with today's action. The estimated average burden per response is 9 hours; the frequency of response is one-time for all respondents that must comply with the rule's reporting requirements and the estimated average number of likely respondents per year is 485. The cost burden to respondents resulting from the collection of information includes the total capital cost annualized over the equipment's expected useful life ($100,958), a total operation and maintenance component ($0 per year), and a labor cost component (about $152,116 per year).

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, EPA has established a public docket for this rule, which includes these ICR, under Docket ID number EPA-HQ-OAR-2010-0600. Submit any comments related to the ICR to EPA and OMB. See **ADDRESSES** section at the beginning of this notice for where to submit comments to EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attention: Desk Office for EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], a comment to OMB is best assured of having its full effect if OMB receives it by [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

C. Regulatory Flexibility Act.

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today’s proposed rule on small entities, small entity is defined as: (1) A small business that is a small industrial entity as defined by the

Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impact of this supplemental proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule would impose more stringent emissions limits and lower surface tension requirements. These new proposed requirements and restrictions to the hard and decorative chromium electroplating and chromium anodizing tanks MACT standard will impact small entities, but those impacts have been estimated to be nominal. The proposed emissions limits reflect the level of performance currently being achieved by most facilities, and many facilities currently have emissions that are far below the proposed limits. With regard to the remaining facilities (those that will need to achieve emissions reductions), most of these facilities can achieve the proposed limits at low costs (e.g., by using additional fume suppressants).

The EPA's analysis estimated that 96 percent of the affected entities will have an annualized cost of less than 1 percent of sales. In addition, approximately 1 percent of affected entities, or 9 facilities with fewer than 20 employees, may have cost-to-sales ratios between 3 to 8 percent. All of these facilities are in the hard chromium electroplating category, with 2 of the facilities in the small hard chromium electroplating category and 7 in the large hard chromium electroplating category.

Since our analysis indicates that a small subset of facilities (about 1 percent) may have cost-to-sales ratios greater than 3 percent, we have conducted additional economic impact analyses on this small subset of facilities to better understand the potential economic impacts for these facilities. The additional analyses indicate the estimates of costs-to-sales ratios in the initial analyses are more likely to be overstated rather than understated because the additional analyses indicate that sales are typically higher for these sources than the average value used in the initial analysis.

Moreover, because of the nature of the market, these facilities are likely to be able to pass cost increases through to their customers. As such, we do not anticipate the proposal to result in firm closures, or substantial profit loss. More information and details of this analysis are provided in the technical document "Economic Impact Analysis for Risk and

Technology Review: Chromium Electroplating," which is available in the docket for this proposed rule.

Although this proposed rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act.

This proposed rule does not contain a Federal mandate under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531-1538 for state, local, or tribal governments or the private sector. The proposed rule would not result in expenditures of $100 million or more for State, local, and tribal governments, in aggregate, or the private sector in any 1 year. The proposed rule imposes no enforceable duties on any State, local, or tribal governments or the private sector. Thus, this proposed rule is not subject to the requirements of sections 202 or 205 of the UMRA.

This proposed rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This action contains no requirements that apply to such governments nor does it impose obligations upon them.

E. Executive Order 13132: Federalism.

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the facilities subject to this action are owned or operated by State governments, and, because no new requirements are being promulgated, nothing in this proposal will supersede State regulations. Thus, Executive Order 13132 does not apply to this proposed rule.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments.

This proposed rule will not have tribal implications, as specified in Executive Order 13175(65 FR 67249, November 9, 2000). It will not have substantial direct effect on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this action.

EPA specifically solicits additional comment on this proposed action from tribal officials.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks.

This proposed rule is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in Executive Order 12866, and because the Agency does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action would not relax the control measures on existing regulated sources. Nevertheless, this proposed action would result in reductions in cancer risks due to chromium emissions for people of all ages, including children. The EPA’s risk assessments (included in the docket for this proposed rule) demonstrate that these regulations, with the amendments being proposed in today’s action, will be health protective.

The public is invited to submit comments or identify peer-reviewed studies and data that assess effects of early life exposure to hexavalent chromium.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use.

This action is not a "significant energy action" as defined under Executive Order 13211, (66 FR 28355 (May 22, 2001)), because it is not likely to have significant adverse effect on the supply, distribution, or use of energy. This action will not create any new requirements for sources in the energy supply, distribution, or use sectors.

I. National Technology Transfer and Advancement Act.

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

This proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any VCS.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice.

Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it maintains or increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority low-income, or indigenous populations. Further, the EPA is proposing that, after implementation of the provisions of this rule, the public health of all demographic groups will be protected with an ample margin of safety.

To examine the potential for any environmental justice issues that might be associated with two of the source categories associated with today’s proposed rule (Hard Chromium Electroplaters and Decorative Chromium Electroplaters), we evaluated the percentages of various social, demographic, and economic groups within the at-risk populations living near the facilities where these source categories are located and compared them to national averages. We did not conduct this type of analysis for the chromic acid anodizing or steel pickling categories because the numbers of people subjected to cancer risks greater than 1-in-1 million due to HAP emissions from these source categories were quite low. The development of demographic analyses to inform the consideration of environmental justice issues in EPA rulemakings is an evolving process. The EPA offers the demographic analyses in this rulemaking as examples of how such analyses might be developed to inform such consideration, and invites public comment on the approaches used and the interpretations made from the results, with the hope that this will support the refinement and improve utility of such analyses for future rulemakings.

Our analysis of the demographics of the population with estimated risks greater than 1-in-1 million indicates potential disparities in risks between demographic groups, including the African American, Other and Multiracial, Hispanic, Below the Poverty Level, and the Over 25 without a High School Diploma groups. These groups stand to benefit the most from the emission reductions achieved by this proposed rulemaking.

EPA defines “Environmental Justice” to include meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and polices. To promote meaningful involvement, after the rule is proposed, EPA will be conducting a webinar to inform the public about the rule and to outline how to submit written comments to the docket. Further stakeholder and public input is expected through public comment and follow-up meetings with interested stakeholders.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: January 27, 2012.

____

Lisa P. Jackson,
Administrator

For the reasons stated in the preamble, part 63 of title 40, chapter I, of the Code of Federal Regulations is proposed to be amended as follows:

PART 63--[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

Subpart N--[AMENDED]

2. Section 63.341 is amended by adding, in alphabetical order in paragraph (a), definitions for *existing affected source* and *new affected source*.

§63.341 Definitions and nomenclature.

(a) * * *

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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

* * * * *

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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

* * * * *

3. Section 63.342 is amended by:

a. Revising paragraphs (c)(1)(i), (c)(1)(ii), and (c)(1)(iii);

b. Adding paragraph (c)(1)(iv);

c. Revising paragraphs (c)(2)(i), (c)(2)(ii), and (c)(2)(iii);

d. Adding paragraph (c)(2)(vi);

e. Revising paragraphs (d)(1) and (d)(2); and

f. Adding paragraph (d)(3) to read as follows:

§63.342 Standards

* * * * *

(c)(1) * * *

(i) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.011 milligrams of total chromium per dry standard cubic meter (mg/dscm) of ventilation air (4.8×10^{-6} grains per dry standard cubic foot (gr/dscf)) for all open surface hard chromium electroplating tanks that are existing affected sources and are located at large hard chromium electroplating facilities; or

(ii) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm (6.6×10^{-6} gr/dscf) for all open surface hard chromium electroplating tanks that are existing affected sources and are located at small, hard chromium electroplating facilities; or

(iii) If a chemical fume suppressant containing a wetting agent is used, not allowing the surface tension of the electroplating or anodizing bath contained within the affected tank to exceed 40 dynes per centimeter (dynes/cm) (2.8×10^{-3} pound-force per foot (lbf/ft)), as measured by a stalagmometer, or 33 dynes/cm (2.3×10^{-3} lbf/ft), as measured by a tensiometer at any time during tank operation; or

(iv) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.006 mg/dscm of ventilation air (2.6×10^{-6} gr/dscf) for all open surface hard chromium electroplating tanks that are new affected sources.

* * * * *

(2) * * *

(i) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.011 mg/dscm of ventilation air (4.8×10^{-6} gr/dscf) for all enclosed hard chromium electroplating tanks that are existing affected sources and are located at large hard chromium electroplating facilities; or

(ii) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm (6.6×10^{-6} gr/dscf) for all enclosed hard chromium electroplating tanks that are existing affected sources and are located at small, hard chromium electroplating facilities; or

(iii) If a chemical fume suppressant containing a wetting agent is used, not allowing the surface tension of the electroplating or anodizing bath contained within the affected tank to exceed 40 dynes/cm (2.8×10^{-3} lbf/ft), as measured by a stalagmometer, or 33 dynes/cm (2.3×10^{-3} lbf/ft), as measured by a tensiometer at any time during tank operation; or

* * * * *

(vi) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.006 mg/dscm of ventilation air (2.6×10^{-6} gr/dscf) for all enclosed hard chromium electroplating tanks that are new affected sources.

* * * * *

(d) <u>Standards for decorative chromium electroplating tanks using a chromic acid bath and chromium anodizing tanks</u>. During tank operation, each owner or operator of an existing, new, or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by either:

(1) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.007 mg/dscm (3.1×10^{-6} gr/dscf) for all existing decorative chromium electroplating tanks using a chromic acid bath and all

existing chromium anodizing tanks; or

(2) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.006 mg/dscm (2.6×10^{-6} gr/dscf) for all new or reconstructed decorative chromium electroplating tanks using a chromic acid bath and all new or reconstructed chromium anodizing tanks;

(3) If a chemical fume suppressant containing a wetting agent is used, not allowing the surface tension of the electroplating or anodizing bath contained within the affected tank to exceed 40 dynes/cm (2.8×10^{-3} lbf/ft), as measured by a stalagmometer or 33 dynes/cm (2.3×10^{-3} lbf/ft), as measured by a tensiometer at any time during tank operation, for all existing, new, or reconstructed decorative chromium electroplating tanks using a chromic acid bath and all existing, new, or reconstructed chromium anodizing tanks.

* * * * *

4. Section 63.343 is amended by:

a. Revising paragraphs (a)(1), (a)(2), and (a)(4);

b. Revising paragraph (b)(1); and

c. Revising paragraphs (c)(1)(ii), (c)(2)(ii), (c)(4)(ii), (c)(5)(i), (c)(5)(ii), and (c)(6)(ii) to read as follows:

§63.343 Compliance provisions.

(a)(1) The owner or operator of an existing affected source shall comply with the emission limitations in §63.342 no later than [**DATE 2 YEARS AFTER PUBLICATION OF FINAL RULE IN FEDERAL REGISTER**].

(2) The owner or operator of a new or reconstructed affected source that has an initial startup after [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], shall comply immediately upon startup of the source.

* * * * *

(4) The owner or operator of a new area source (i.e., an area source for which construction or reconstruction was commenced after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]) that increases actual or potential emissions of hazardous air pollutants such that the area source becomes a major source must comply with the provisions for new major sources, immediately upon becoming a major source.

* * * * *

(b) *Methods to demonstrate initial compliance.* (1) Except as provided in paragraphs (b)(2) and (b)(3) of this section, an owner or operator of an affected source subject to the requirements of this subpart is required to conduct an initial performance test as required under §63.7, using the procedures and test methods listed in §§63.7 and 63.344.

* * * * *

(c) * * *

(1) * * *

(ii) On and after the date on which the initial performance test is required to be completed under §63.7, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the composite mesh-pad system once each day that any affected source is operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within ±2 inches of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.

* * * * *

(2) * * *

(ii) On and after the date on which the initial performance test is required to be completed under §63.7, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the velocity pressure at the inlet to the packed-bed system and the pressure drop across the scrubber system once each day that any affected source is operating. To be in compliance with the standards, the scrubber system shall be operated within ±10 percent of the velocity pressure value established during the initial performance test, and within ±1 inch of water column of the pressure drop value established during the initial performance test, or within the range of compliant operating parameter values established during multiple performance tests.

* * * * *

(4) * * *

(ii) On and after the date on which the initial performance test is required to be completed under §63.7, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the fiber-bed mist eliminator, and the control device installed upstream of the fiber bed to prevent plugging, once each day that any affected source is operating. To be in compliance with the standards, the fiber-bed mist eliminator and the upstream control device shall be operated within ±1 inch of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.

* * * * *

(5) *Wetting agent-type or combination wetting agent-type/foam blanket fume suppressants.* (i) During the initial performance test, the owner or operator of an affected source complying with the emission limitations in §63.342 through the use of a wetting agent in the electroplating or anodizing bath shall determine the outlet chromium concentration using the

procedures in §63.344(c). The owner or operator shall establish as the site-specific operating parameter the surface tension of the bath using Method 306B, appendix A of this part, setting the maximum value that corresponds to compliance with the applicable emission limitation. In lieu of establishing the maximum surface tension during the performance test, the owner or operator may accept 40 dynes/cm, as measured by a stalagmometer, or 33 dynes/cm, as measured by a tensiometer, as the maximum surface tension value that corresponds to compliance with the applicable emission limitation. However, the owner or operator is exempt from conducting a performance test only if the criteria of paragraph (b)(2) of this section are met.

(ii) On and after the date on which the initial performance test is required to be completed under §63.7, the owner or operator of an affected source shall monitor the surface tension of the electroplating or anodizing bath. Operation of the affected source at a surface tension greater than the value established during the performance test, or greater than 40 dynes/cm, as measured by a stalagmometer, or 33 dynes/cm, as measured by a tensiometer, if the owner or operator is using this value in accordance with paragraph (c)(5)(i) of this section, shall constitute noncompliance with the standards. The surface tension shall be monitored according to the following schedule:

* * * * *

(6) * * *

(ii) On and after the date on which the initial performance test is required to be completed under §63.7, the owner or operator of an affected source shall monitor the foam blanket thickness of the electroplating or anodizing bath. Operation of the affected source at a foam blanket thickness less than the value established during the performance test, or less than 2.54 cm (1 inch) if the owner or operator is using this value in accordance with paragraph (c)(6)(i) of this section, shall constitute noncompliance with the standards. The foam blanket thickness shall be measured according to the following schedule:

* * * * *

5. Section 63.344 is amended by:

a. Adding paragraphs (b)(1)(v) through (b)(1)(viii); and

b. Deleting paragraph (b)(2); to read as follows:

§63.344 Performance test requirements and test methods.

* * * * *

(b)(1) * * *

(v) The performance test was conducted after January 25, 1995;

(vi) As of [**DATE OF PUBLICATION OF FINAL RULE IN FEDERAL REGISTER**], the source was using the same emissions controls that were used during the compliance test; and

(vii) As of [**INSERT DATE OF PUBLICATION OF FINAL RULE IN FEDERAL REGISTER**], the source was operating under conditions that are representative of the conditions under which the source was operating during the compliance test; and

(viii) Based on approval from the permitting authority.

* * * * *

6. Section 63.347 is amended by adding paragraph (f)(3) to read as follows:

§ 63.347 Reporting requirements.

* * * * *

(f)(3)(i) Within 90 days after the date of completing each performance test(defined in §63.2) as required by this subpart, you must submit the results of the performance tests required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX)(www.epa.gov/cdx). Performance test data must be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/index.html). Only data collected using test methods on the ERT website are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority.

(ii) All reports required by this subpart not subject to the requirements in paragraphs (3)(i) of this section must be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (3)(i) of this section in paper format.

* * * * *

Subpart CCC--[AMENDED]

7. Section 63.1157 is amended by revising (b)(2) to read as follows:

§ 63.1157 Emission standards for existing sources

* * * * *

(b) * * *

(2) In addition to the requirement of paragraph (b)(1) of this section, no owner or operator of an existing plant shall cause or allow to be discharged into the atmosphere from the affected plant any gases that contain chlorine (Cl_2) in a concentration in excess of 6 ppmv.

* * * * *

§ 63.1161 [Amended]

8. Section 63.1161 is amended by deleting paragraph (c)(2).

9. Section 63.1164 is amended by revising (a) to read as follows:

§ 63.1164 Reporting requirements.

(a) *Reporting results of performance tests.* As required by §63.10(d)(2) of subpart A of this part, the owner or operator of an affected source shall report the results of any performance test required by this paragraph to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX)(www.epa.gov/cdx). Performance test data shall be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/index.html). Only data collected using test methods listed on the ERT website are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the performance test information being submitted is confidential business information (CBI) shall submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) by registered letter to EPA and the same ERT file with the CBI omitted to EPA via CDX as described earlier in this paragraph. The compact disk shall be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. At the discretion of the delegated authority, owners or operators shall also submit these reports to the delegated authority in the format specified by the delegated authority.

* * * * *

Appendix A--[AMENDED]

10. Appendix A to part 63, Method 306-B is amended revising paragraph 11.2.1.3 to read as follows:

METHOD 306B - SURFACE TENSION MEASUREMENT FOR TANKS USED AT CHROMIUM ELECTROPLATING AND CHROMIUM ANODIZING FACILITIES

* * * * *

11.0 Analytical Procedure

* * * * *

11.2.1.3 If a measurement of the surface tension of the solution is above the 40 dynes per centimeter limit, as measured using a stalagmometer, or above the 33 dynes per centimeter limit, as measured using a tensiometer, or above an alternate surface tension limit established during the performance test, the time interval shall revert back to the original monitoring schedule of once every 4 hours. A subsequent decrease in frequency would then be allowed according to Section 11.2.1.

* * * * *

[FR Doc. 2012-2434 Filed 02/07/2012 at 8:45 am; Publication Date: 02/08/2012]