**Memorandum**

**Subject:** Technical Support Document:Information to Support New Source Performance Standards Advanced Notice of Proposed Rulemaking

**From:** Ms. Janice Godfrey, Policy and Strategies Group, OAQPS/SPPD

**To:** New Source Performance Standards Project Docket

**Date:** July 6, 2011

**INTRODUCTION**

This technical support document (TSD) provides additional information to accompany the Advanced Notice of Proposed Rulemaking (ANPR) (76 FR 65653, Monday, October 24, 2011) which requests public comment on EPA’s New Source Performance Standards (NSPS) Management Strategy. The intent of the NSPS Management Strategy is to comply with EPA’s statutory requirement to review and revise NSPS while focusing attention on those NSPS that have the potential for significant net positive environmental benefits. One of the strategies to achieve this goal is to prioritize the evaluation of NSPS which will result in net environmental benefits by identifying NSPS that remain effective, and thus do not need to be reviewed.

The ANPR identifies three criteria which EPA believes are appropriate for consideration in making a determination that a review of an existing NSPS would not result in any environmental benefit. These criteria are discussed in more detail in the ANPR, but may be summarized as follows:

1. The application of the best system of emission reduction from the current NSPS remains appropriate. (*e.g.,* review of the NSPS would not result in a more stringent emissions limit through technology improvements.)
2. There is no anticipated applicability of the NSPS during the current review cycle. (*e.g.,* no anticipated new, modified, or reconstructed sources are expected to trigger applicability under the NSPS over the next 8 years)
3. There is another regulatory program which has rules in place that are applicable to the same pollutants and emission sources as the NSPS, with equivalent or greater stringency. (*e.g.,* review of the NSPS would not result in more stringent emissions limits than another existing CAA requirement.)

Table 1 below (A copy of Table 2 from the ANPR) lists NSPS standards for which EPA believes the current NSPS sufficiently addresses pollutants of concern and thus remains effective, and for which EPA believes revision of such NSPS will not provide net environmental benefits. The table also indicates which of the three criteria described above apply to each of the listed NSPS.

The following section of this document provides brief summaries of the manner in which EPA believes the identified criteria establish that no revisions are required for each of these candidates, including citations for the NSPS and any other referenced rules. Attachment 1 includes detailed assessments of these criteria for the three NSPS categories described in Section III.B.4 of the ANPR, Primary Zinc Production, Magnetic Tape Production, and Publication Rotogravure Printing.

Table 1: NSPS potentially meeting criteria to not be reviewed based on CAA 111(b) (1) (B) authority

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subpart** | **NSPS** | **No Review Criterion** | | |
| **BDT from current standard remains appropriate** | **No expected applicability of NSPS (No new/modified/ reconstructed sources)** | **Equivalent/more stringent requirements in Other CAA actions** |
| P | Primary Copper Smelters | x | x | x |
| Q | Primary Zinc Smelters | x | x | x |
| T | Phosphate Fertilizers - Wet-Process Phosphoric Acid Plants |  |  | x |
| U | Phosphate Fertilizers - Superphosphoric Acid Plants |  |  | x |
| V | Phosphate Fertilizers - Diammonium Phosphate Plants |  |  | x |
| W | Phosphate Fertilizers - Triple Superphosphate Plants |  | x | x |
| X | Phosphate Fertilizers - Granular Triple Superphosphate Storage Facilities |  | x | x |
| EE | Metal Furniture Surface Coating |  | x |  |
| MM | Auto/Light Duty Truck Surface Coating |  |  | x |
| NN | Phosphate Rock Plants | x | x |  |
| QQ | Graphic Arts Industry/Publication Rotogravure Printing |  |  | x |
| BBB | Rubber Tire Manufacturing |  |  | x |
| HHH | Synthetic Fibers | x |  |  |
| SSS | Magnetic Tape Coating Facilities |  | x |  |

**SUMMARY INFORMATION SUPPORTING THE APPLICATION OF CRITERIA FOR SELECTION OF NSPS AS POTENTIAL CANDIDATES FOR NO REVISION**

**Primary Copper Smelters[[1]](#footnote-2)**

An evaluation of currently available information indicates that the Administrator need not review the NSPS for Primary Copper Smelters affected facilities at this time. The primary reason is that a review of the currently available technologies would not result in a more stringent level of control. The best system of emission reduction for controlling sulfur dioxide (SO2) emissions from roasters, smelting furnaces, and copper converters at primary copper production facilities is a double-absorption sulfuric acid plant. This technology is still commonly employed to control SO2 emissions in the primary copper industry and other primary metals industries.

Additionally, there is no anticipated applicability of the NSPS during the current review cycle, because no new or modified affected facilities subject to the NSPS are expected in the next 8 years. This is primarily as a result of changes in the types of processes typically used by the industry, and closure of U.S. copper smelting facilities due to foreign competition.

Finally, another regulatory program has rules in place that EPA believes are applicable to the same pollutants and emission sources as the NSPS, such that a revision of the NSPS would result in NSPS requirements of equal or lesser stringency. The controls and emission limits specified in the NESHAP for Primary Copper Smelting[[2]](#footnote-3) and the Area Source NESHAP for Primary Copper Smelting [[3]](#footnote-4) result in emissions reductions that meet or exceed those which would be required by a reviewed and subsequently revised NSPS.

**Primary Zinc Smelters[[4]](#footnote-5)**

An evaluation of currently available information indicates that the Administrator need not review at this time the NSPS for Primary Zinc Smelters, which lists roasters and sintering operations as the affected facilities. The primary reason for this recommendation is that EPA believes a review of the currently available technologies would not result in any increased stringency for emission limits. BDT for controlling sulfur dioxide (SO2) emissions from roasters at primary zinc production facilities is still employed to control SO2 emissions in the primary zinc industry and other primary metals industries.

Additionally, there is no anticipated applicability of the NSPS during the current review cycle, because no new or modified affected facilities that would be subject to the NSPS are expected in the next 8 years. This is primarily as a result of changes in the types of processes typically used by the industry, and an overall decline in the number of operational facilities in recent decades.

Finally, under section 112 of the CAA, requirements are in place which would apply to any new or modified facility with provisions which are effectively at least as stringent as what would likely be considered BDT under an NSPS BDT review. The controls and emissions limits specified in the NESHAP for Primary Nonferrous Metals Area Sources - Zinc, Cadmium, and Beryllium[[5]](#footnote-6) result in reductions of SO2 and PM that meet or exceed those which would be required by a reviewed and subsequently revised NSPS.

**Phosphate Fertilizers - Wet-Process Phosphoric Acid Plants[[6]](#footnote-7)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Phosphate Fertilizers - Wet-Process Phosphoric Acid affected facilities at this time. Another regulatory program has rules in place that EPA believes are applicable to the same pollutants and emission sources as the NSPS, such that a revision of the NSPS would result in NSPS requirements of equal or lesser stringency. The controls and emission limits specified in the NESHAP for Phosphoric Acid Manufacturing Plants[[7]](#footnote-8) and the NESHAP for Phosphate Fertilizers Production Plants[[8]](#footnote-9) result in emissions reductions that meet or exceed those which would be required by a revised NSPS. We anticipate new sources in this industry and we expect this particular production process to dominate the Phosphate Fertilizer production industry.

**Phosphate Fertilizers - Superphosphoric Acid Plants[[9]](#footnote-10)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Phosphate Fertilizers - Superphosphoric Acid affected facilities at this time. Another regulatory program has rules in place that EPA believes are applicable to the same pollutants and emission sources as the NSPS, such that a revision of the NSPS would result in NSPS requirements of equal or lesser stringency. The controls and emission limits specified in the NESHAP for Phosphoric Acid Manufacturing Plants[[10]](#footnote-11) and the NESHAP for Phosphate Fertilizers Production Plants[[11]](#footnote-12) result in emissions reductions that meet or exceed those which would be required by a revised NSPS. We anticipate new sources in this industry and think it is likely that the at least two new sources using this particular production process will start up within the next 8 years.

**Phosphate Fertilizers - Diammonium Phosphate Plants[[12]](#footnote-13)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Phosphate Fertilizers - Diammonium Phosphate (DAP)affected facilities at this time. Another regulatory program has rules in place that EPA believes are applicable to the same pollutants and emission sources as the NSPS, such that a revision of the NSPS would result in NSPS requirements of equal or lesser stringency. The controls and emission limits specified in the NESHAP for Phosphoric Acid Manufacturing Plants[[13]](#footnote-14) and the NESHAP for Phosphate Fertilizers Production Plants[[14]](#footnote-15) result in emissions reductions that meet or exceed those which would be required by a revised NSPS. Because DAP is produced from wet-process phosphoric acid plants, we anticipate new sources in this industry and we expect this particular production process to dominate the Phosphate Fertilizer production industry.

**Phosphate Fertilizers - Triple Superphosphate Plants[[15]](#footnote-16)**

An evaluation of currently available information indicates that the Administrator need not review the NSPS for Phosphate Fertilizers - Triple Superphosphatefacilities at this time. Another regulatory program has rules in place that EPA believes are applicable to the same pollutants and emission sources as the NSPS, such that a revision of the NSPS would result in NSPS requirements of equal or lesser stringency. The controls and emission limits specified in the NESHAP for Phosphoric Acid Manufacturing Plants[[16]](#footnote-17) and the NESHAP for Phosphate Fertilizers Production Plants[[17]](#footnote-18) result in emissions reductions that meet or exceed those which would be required by a revised NSPS. Furthermore, triple superphosphate is used to produce Granular Triple Superphosphate **(**GTSP), discussed below. Because demand for GTSP has ceased, the production of triple superphosphate has likewise ceased. We do not anticipate new sources in this source category within the next 8 years.

**Phosphate Fertilizers - Granular Triple Superphosphate Plants[[18]](#footnote-19)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Phosphate Fertilizers - Granular Triple Superphosphateaffected facilities at this time. Another regulatory program has rules in place that EPA believes are applicable to the same pollutants and emission sources as the NSPS, such that a revision of the NSPS would result in NSPS requirements of equal or lesser stringency. The controls and emission limits specified in the NESHAP for Phosphoric Acid Manufacturing Plants[[19]](#footnote-20) and the NESHAP for Phosphate Fertilizers Production Plants[[20]](#footnote-21) result in emissions reductions that meet or exceed those which would be required by a revised NSPS. Additionally, demand for and production of GTSP have ceased over the last 20 years. We therefore anticipate no new sources in this industry over the next 8 years.

**Metal Furniture Surface Coating[[21]](#footnote-22)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Metal Furniture Surface Coating Facilities at this time because there is no anticipated applicability for the NSPS for Metal Furniture Surface Coating Facilities during the current review cycle. This is primarily due to the continual decline of the industry over the last decade, largely as a result of increased foreign production. As a result, there is no growth anticipated in the industry over the next 8 years, and there are no anticipated reconstruction or modification events which would trigger NSPS applicability.

**Auto/Light Duty Truck Surface Coating[[22]](#footnote-23)**

An evaluation of currently available information indicates that the Administrator need not review the NSPS for Auto/Light Duty Truck Surface Coating affected facilities at this time. Another regulatory program has rules in place which EPA believes would apply to any new or modified facility with provisions which, while they do not provide a one-to one matching with those of the NSPS, are effectively at least as stringent as what would likely be considered BDT under an NSPS BDT review. The controls and emission limits specified in the NESHAP for Surface Coating of Automobiles and Light-Duty Trucks[[23]](#footnote-24) result in emissions reductions that meet or exceed those which would be required by a revised NSPS.

**Phosphate Rock Plants[[24]](#footnote-25)**

An evaluation of currently available information indicates that there is no need at this time for revision of the NSPS for Phosphate Rock Plants consisting of dryers, calciners, grinders, and handling and storage facilities affected facilities. The primary reason is that a review of the currently available technologies would not result in a more stringent level of control. A second reason is that no new or modified affected facilities are expected in the next 8 years due to continual decline in the industry over the last 20 years with no indication of a future reversal of this trend.

**Graphic Arts Industry/Publication Rotogravure Printing[[25]](#footnote-26)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Graphic Arts Industry/Publication Rotogravure Printing at this time. Another regulatory program has rules in place that EPA believes are applicable to the same pollutants and emission sources as the NSPS, such that a revision of the NSPS would result in NSPS requirements of equal or lesser stringency. The controls and emission limits specified in the NESHAP for Printing and Publishing[[26]](#footnote-27) is significantly more stringent than the NSPS under subpart QQ.

**Rubber Tire Manufacturing[[27]](#footnote-28)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Rubber Tire Manufacturing affected facilities at this time. Another regulatory program has rules in place which EPA believes would apply to any new or modified facility with provisions which are effectively at least as stringent as what would likely be considered BDT under an NSPS BDT review. The controls and emission limits specified in the NESHAP for Tire Manufacturing[[28]](#footnote-29) likely result in emissions reductions that meet or exceed those which would be required by a reviewed and subsequently revised NSPS.

**Synthetic Fiber Production Facilities[[29]](#footnote-30)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Synthetic Fiber Production facilities at this time. The primary reason is that EPA believes that a review of the currently available technologies would not result in any increased stringency for emission limits, since EPA is unaware of any new emission control technologies for the industry.

**Magnetic Tape Production[[30]](#footnote-31)**

An evaluation of currently available information indicates that the Administrator need not revise the NSPS for Magnetic Tape Coating Facilities at this time because there is no anticipated applicability for the NSPS for Magnetic Tape Coating Facilities during the current review cycle. This is primarily due to the continual decline of the industry over the past 20 years resulting from foreign competition and changes in the marketplace since the emergence of alternative technologies (*e.g.,* optical recording media.) As a result, there is no growth anticipated in the industry over the next 8 years, and there are no anticipated reconstruction or modification events which would trigger NSPS applicability.

**ATTACHMENT 1**

**Detailed Assessments of NSPS Categories Described in ANPR:**

**Primary Zinc Smelters (40 CFR Part 60, Subpart Q),**

**Magnetic Tape Production (40 CFR Part 60, Subpart SSS)**

**Graphic Arts Industry/Publication Rotogravure Printing (40 CFR Part 60, Subpart QQ)**

**Primary Zinc Smelters (40 CFR Part 60, Subpart Q)**

An evaluation of currently available information indicates that there is no need at this time for revision of the NSPS for Primary Zinc Smelters consisting of roaster and sintering operation affected facilities. The primary reason is that a review of the currently available technologies would not result in a more stringent level of control. A second reason is that no new or modified affected facilities are expected in the next 8 years due to changes in the types of processes typically used. Finally, another Clean Air Act (CAA) requirement would apply to any new or modified facility with provisions which are effectively at least as stringent as what would likely be considered Best Demonstrated Technology (BDT) under an NSPS BDT review.

We believe that a review of the currently available technologies would not result in a more stringent level of control for the two processes controlled under the NSPS: roasters and sintering machines. The Background Information Document (BID) for the Primary Zinc Production NSPS[[31]](#footnote-32) contains EPA’s determination that BDT for controlling sulfur dioxide (SO2) emissions from roasters at primary zinc production facilities is a double-absorption sulfuric acid plant. This technology is still commonly employed to control SO2 emissions in the primary zinc industry and other primary metals industries. Average daily conversion rates of at least 99.7 – 99.9 % are achievable with the double contact process.[[32]](#footnote-33) We have not identified any other control technology that could achieve greater reductions, and we believe that a new BDT determination would not result in any change in the current level of control.

The same BID described BDT for sintering machines as fabric filter control for particulate matter (PM) emissions. This technology, which can achieve emission reductions up to 99 %, still represents the most effective technology to capture these emissions. Therefore, we believe that a new BDT determination would not result in any change in the current level of control.

Changes in industry structure support a finding that there will be no new primary zinc production facilities in the U.S. in the next 8 years. World-wide, 70 percent of the zinc produced comes from mined ores and 30 percent from recycled or secondary zinc. The level of recycling is increasing each year, and over 80 percent of the zinc available for recycling is actually recycled.[[33]](#footnote-34) Twelve companies recycle zinc in the U.S., primarily in the form of electric arc furnace (EAF) dust, which is a hazardous waste produced by the steel mini-mill manufacturing process.[[34]](#footnote-35) These recycling processes do not use a roaster, which is the primary source of emissions from a primary zinc smelting operation.

The second affected facility in the NSPS is the sintering operation, which is subject to a PM emission limit and a visible emissions limit (opacity). Sintering only takes place at one of the two available processes for converting zinc sulfide concentrate to zinc metal. At present, there are no U.S. operations that use this process. It is unlikely that any sources would install such a process in the future. According to an overview of zinc smelting, the vast majority of zinc smelting plants in the western world use the electrolytic process (vs. sintering and retorting in the pyrometallurgical process alternative) because it is more energy efficient, has higher recovery rates, and is easier to automate, which improves productivity.[[35]](#footnote-36)

Data from the US Geological Survey (USGS) [[36]](#footnote-37) and EPA1 show that the primary zinc industry has been in decline for over a decade. In 1974, when the NSPS was under development, there were eight primary zinc production facilities in the US. There were four primary zinc production facilities listed in the 1994 USGS Minerals Yearbook, and by 2007 only one was operational, the Nyrstar Clarkesville, TN refinery[[37]](#footnote-38). A second former primary producer, Horsehead Holding Corporation’s Monaca, PA plant, has converted its production facilities to secondary production only.[[38]](#footnote-39) According to the company website of a third former primary producer (Big River Zinc) in Illinois, there are plans to restart a suspended smelter operation in Illinois, but no details on timing are available. Instead, the company is focusing on converting the existing electrolytic operation to wash impure concentrates produced by a recycling plant in Ohio.[[39]](#footnote-40) Because any future use of the Illinois site as primary production facility would take place on an existing site, we do not believe it would trigger NSPS applicability. Because of this, we believe that no new or modified primary zinc smelter is expected to be constructed using existing technology in the next 8 years.

Furthermore, there is another applicable CAA regulation whose requirements are at least as stringent as what would likely be considered BDT under an NSPS BDT review. As described below, the controls employed to comply with requirements of the NSPS for Primary Zinc Smelters and the NESHAP for Primary Nonferrous Metals Area Sources - Zinc, Cadmium, and Beryllium (40 CFR Part 63, Subpart GGGGGG)[[40]](#footnote-41) are effectively the same. Table 1 summarizes the requirements of the two rules.

Control of emissions of SO2 and visible emissions (required by the NSPS) and air toxics PM (required by the NESHAP) from roasters are both achieved at all currently existing facilities by venting the emissions to a sulfuric acid plant. Under the NSPS, roasters are subject to SO2 emission limits. Meeting those limits requires the source to duct roaster emissions to a sulfuric acid plant to reduce SO2 emissions. In order for the sulfuric acid plant to operate properly, the roaster exhaust must first be cleaned of PM. The area source NESHAP codifies this step in the process by requiring a PM control device, with the goal of achieving control of air toxics PM. However, the NESHAP also specifically requires that off-gases from each roaster are vented to a sulfuric acid plant, including during the charging of the roaster. Thus, although the NESHAP has no specific emission limit for SO2, it effectively requires the same level of control as the NSPS. The preamble to the proposal of the Primary Nonferrous Metals Area Source NESHAP10, describes the effectiveness of the controls as follows:

“While the sulfuric acid plants were originally installed to recover sulfuric acid as a by-product and to control SO2 emissions, the inherent design and operating requirements of these plants also provide effective control of PM and metal HAP contained in roaster offgases. The sulfuric acid production process involves the catalytic conversion of the SO2 contained in the off-gases to produce liquid sulfuric acid. To optimize the process performance and prevent extensive damage to the catalysts and other critical process equipment, the first step of the process requires that the roaster off-gases be precleaned and conditioned. These operations involve first passing the gas stream through multiple control devices for the removal of PM and to reduce gas stream temperature. By using multiple PM control devices in series (multicyclones, electrostatic precipitators, and venturi scrubbers) to treat roaster exhaust gases before entering the sulfuric acid plant, very high overall PM and metal HAP removal efficiencies are achieved. Consequently, there is little or no PM or metal HAP emitted in the tail gas from the sulfuric acid plant.”

“Because rigorous treatment of the roaster off-gases to remove PM and metal HAP is a necessary operating condition for the sulfuric acid plant, requiring that cleaned gases be vented to a sulfuric acid plant ensures that emissions of HAP metals are either nonexistent or limited to trace amounts.”

Although the NESHAP does not include any limitation on visible emissions (opacity) from the outlet of the acid plant (as the NSPS does), any new facilities would still be subject to the opacity limits imposed by the NSPS.

Emissions from the second affected facility referenced in the NSPS, sintering machines, are addressed under the NESHAP through a direct reference to the existing NSPS provisions. As described above, sintering machines (and the pyrometallurgical process for primary zinc smelting) are no longer employed at any currently operational primary zinc facilities. Because the pyrometallurgical process is less energy efficient, has lower recovery rates, and is more difficult to automate, we do not believe that it is likely to be employed at any existing or new facilities. Because of this, and because currently available information does not indicate any improvements in technology which might affect emissions from this source type, we believe that the currently existing BDT for sintering machines at primary zinc facilities is unlikely to change.

Taking these factors into account, we believe that the design imperatives of the sulfuric acid plant combined with the NESHAP requirements will result in the installation of controls equivalent to BDT under the NSPS at any new primary zinc facility, were one to be constructed.

**Table 1: Comparison of Requirements: The Primary Zinc NSPS (Part 60, Subpart Q) and the Primary Nonferrous Metals Area Source NESHAP (Part 63, Subpart GGGGGG)**

| **Emission Source** | **Pollutant** | **NSPS Requirement** | **NESHAP Requirement** |
| --- | --- | --- | --- |
| Roaster | SO2 | 0.065 % by volume. Sources meet this limit by cleaning the roaster exhaust using PM controls and then ducting emissions to a sulfuric acid plant. | The NESHAP does not address SO2 emissions or sulfuric acid mist because they are not HAP. However, it does require existing and new sources to exhaust the off-gases from each roaster to a sulfuric acid plant, including during the charging of the roaster. Although there is no numeric emission limit specified, the effective level of control achieved is equivalent. |
| PM | The NSPS does not directly address PM. However, in order to meet the SO2 standard, sources must clean the roaster exhaust to avoid fouling the catalyst in the acid plant. | Existing and new sources must exhaust the off-gases from each roaster to a PM control device, including during the charging of the roaster. Because rigorous treatment of the roaster off-gases to remove PM and metal HAP is a necessary operating condition for the sulfuric acid plant, requiring that cleaned gases be vented to a sulfuric acid plant ensures that emissions of HAP metals are either nonexistent or limited to trace amounts. |
| Opacity | 20 % opacity (acid mist) from the sulfuric acid plant. | The NESHAP does not address sulfuric acid mist because it is not a HAP. |
| Furnaces | PM | (No NSPS requirement for this emission source.) | (1) *PM Emissions limits:* Existing Sources (a) .93 lbs/hr. from the exhaust vent of a zinc cathode melting furnace; (b) 0.1 lb/hr from the exhaust vent of a furnace that melts zinc dust, zinc chips, and/or other materials containing zinc; (c) 0.228 lb/hr from the vent for the combined exhaust from a furnace melting zinc scrap and an alloy furnace; (d) 0.014 gr/dscf from the exhaust vent of an anode casting furnace; (e) 0.015 gr/dscf from the exhaust vent of a cadmium melting furnace; and (f) 0.005 gr/dscf as an alternative to the limits in lb/hr in (a)-(c); New Sources (a) 0.005 gr/dscf from the exhaust vent of a zinc cathode and melting furnace, furnace melting zinc dust, zinc chips, and/or other materials containing zinc, and alloy melting furnace; (b) 0.014 gr/dscf from the exhaust of an anode casting furnace; and (c) 0.015 gr/dscf from the exhaust vent of a cadmium melting furnace;  (2) O*perating Parameters and Monitoring:* Existing and new sources must establish and comply with operating parameters and monitoring requirements |
| Sintering Machine | SO2 | Any sintering machine which eliminates more than 10 percent of the sulfur initially contained in the zinc sulfide ore concentrates will be considered as a roaster. | The NESHAP does not address SO2. |
| PM | 0.022 gr/dscf (50 mg/dscm). Initial Method 5 test only. | Existing and new sources must meet the PM emissions limit in 40 CFR 60.172 for any sintering machine operated. (This is a reference to Part 60, Subpart Q, the NSPS for Primary Zinc) |
| Opacity | 20 % Opacity measured by COMS | Existing and new sources must meet the opacity limit in 40 CFR 60.174(a) for any sintering machine operated. (This is a reference to Part 60, Subpart Q, the NSPS for Primary Zinc) |

**Magnetic Tape Production (40 CFR Part 60, Subpart SSS)**

An evaluation of currently available information indicates that the NSPS for Magnetic Tape Coating Facilities remains effective; therefore, we believe a revision of the standard would not be needed at this time. The primary basis for this assessment is the continual decline of the industry over the past 20 years. As a result, there is no growth anticipated in the industry over the next 8 years, and there are no anticipated reconstruction or modification events which would trigger NSPS applicability. Consequently, there would be no environmental benefit in reviewing, and subsequently revising emission limits based on what would be considered BDT for the magnetic tape production NSPS category at this time.

Information collected in 2005 by EPA during the initial development of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for the magnetic tape production industry[[41]](#footnote-42),[[42]](#footnote-43) clearly shows the industry has been in decline for decades. This has been due to foreign competition and changes in the marketplace resulting from the emergence of alternative technologies (*e.g.,* optical recording media.) The NESHAP development process includes the development of the original NESHAP for magnetic tape production in 1994 and a MACT review and residual risk determination in 2005. During the NESHAP development process, EPA prepared facility counts for the industry, based on direct contact with industry representatives and State regulatory agencies. Discussion with industry representatives at the time of the residual risk analysis conducted in 2005 also revealed that none of the remaining facilities indicated any plans to add lines or modify their magnetic tape production operations.

A search for NAICS 334613 “Magnetic and Optical Recording Media Manufacturing,” performed via EPA’s RACT/BACT/LAER Clearinghouse (RBLC) database identified two facilities with any permit activity, both dating to the early 1990s. Both of the facilities are among the six facilities identified as being currently operational in EPA’s 2005 MACT review and residual risk determination. One of the two facilities identified was specifically cited as being subject to the magnetic tape production NSPS.

Table 2 is a summary of the magnetic tape industry facility count information collected during the magnetic tape NESHAP development process. It shows a decline in magnetic tape production facilities of approximately 85 percent since 1988, from 42 facilities to 6 (all 6 of which were major sources under the NESHAP).

We also reviewed other data sources to confirm the industry growth trends identified in EPA’s research. The Census data for the NAICS primarily corresponding to the magnetic tape industry, NAICS 334613 (Magnetic and Optical Recording Media Manufacture), cannot be directly compared with the facility counts taken from the NESHAP development process, as many of the facilities in the category manufacture products that are not regulated by the MACT rule (*e.g*., recordable CD and DVD media, which are produced using an entirely different process from magnetic tape.) The census data include optical media manufacture and are not directly representative of the industry covered by the NSPS and NESHAP regulations. Data indicating the portion of the broader industry represented by magnetic tape were not available. However, the available census data[[43]](#footnote-44) shows a moderate (33 percent) decline in establishments in the broader sector represented by NAICS 334613 between 1997 and 2002, and a sharp (72 percent) decline in employment, perhaps reflecting consolidation and automation.

We believe that there is no need at this time for revision of the NSPS for Magnetic Tape Production operations, because there is no growth anticipated in the industry over the next 8 years, and there are no anticipated reconstruction or modification events which would trigger NSPS applicability. The lack of expected growth is based on decades of decline in magnetic tape facilities reflected by the facility counts compiled during EPA regulatory development for the magnetic tape NESHAP in conjunction with the moderate decline in the entire magnetic and optical recording media manufacture industry shown by recent census data.

**Table 2: Estimated Facility Numbers in Magnetic Tape Industry, 1988-2005**

|  |  |
| --- | --- |
| Year | Number of Facilities in Magnetic Tape Industry |
| 1988 | 42 |
| 1994 | 25 |
| 2005 | 6 |

Source Notes: 1988 number is taken from the preamble to the 1994 NESHAP. 1994 and 2005 numbers are taken from 2005 MACT review & Residual Risk analysis.

**Graphic Arts Industry/Publication Rotogravure Printing (40 CFR Part 60, Subpart QQ)**

The third example of an NSPS category for which currently available information indicates that there is no need at this time for review of the applicable NSPS is Publication Rotogravure Printing (40 CFR 60 subpart QQ). In accordance with criteria 3, the NESHAP (40 CFR subpart KK) for Printing and Publishing is significantly more stringent than the NSPS under subpart QQ. The NESHAP recently went through EPA’s Risk and Technology Review (RTR) process and no additional technology standards were adopted pursuant to CAA section 112(d) (6). Furthermore, any new facility or new press would likely be subject to non-attainment New Source Review (NSR) or Prevention of Significant Deterioration (PSD), and consequently required to apply Lowest Achievable Emission Rate (LAER) or Best Available Control Technology (BACT). Only two new facilities have been built in the past 15 years since the NESHAP was promulgated in 1996. Both of these facilities placed their presses in permanent total enclosures using carbon adsorbers to achieve very efficient solvent recovery. As part of EPA’s Risk and Technology Review (RTR) it was determined that no new advancements in practices, processes or control technologies beyond those in place at the two new facilities were identified. The BACT level control at the two new facilities is representative of current industry practice and is state of the art technology, and a revised best system of emission reduction for the solvent recovery practice listed in the NSPS would not be more stringent. Under criteria 2, there has been almost no growth in the industry in the past decade. The number of publication rotogravure printing facilities has declined from 27 to under 20 in the last 10 years. Only two facilities have been built in the last 15 years. No new facilities are anticipated during the next 8 year review cycle. Therefore, we do not expect applicability of the NSPS in the foreseeable future. Therefore, we believe no additional emission reductions would be achieved from a revision to the current standard. Thus the agency believes that the Publication Rotogravure Printing NSPS (subpart QQ) meets the criteria to not review as described in this document.

1. 40 CFR Part 60 - Subpart P, 40 CFR 60.160 [41 FR 2338, Jan. 15, 1976] [↑](#footnote-ref-2)
2. 40 CFR Part 63 - Subpart QQQ, 40 CFR 63.1440 [67 FR 40478, Wednesday June 12, 2002] [↑](#footnote-ref-3)
3. 40 CFR Part 63 - Subpart EEEEEE, 40 CFR 63.11146 [72 FR 2929, Tuesday, Jan 23, 2007] [↑](#footnote-ref-4)
4. 40 CFR 60 Subpart Q, 40 CFR 60.170 [41 FR 2340, Jan. 15, 1976] [↑](#footnote-ref-5)
5. 40 CFR 63 Subpart GGGGGG, 40 CFR 63.1440 [72 FR 2930, Tuesday, January 23, 2007] [↑](#footnote-ref-6)
6. 40 CFR Part 60 - Subpart T, 40 CFR 60.200 [42 FR 37937, July 25, 1977] [↑](#footnote-ref-7)
7. 40 CFR Part 63 - Subpart AA, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-8)
8. 40 CFR Part 63 - Subpart BB, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-9)
9. 40 CFR Part 60 - Subpart U, 40 CFR 60.210 [42 FR 37937, July 25, 1977] [↑](#footnote-ref-10)
10. 40 CFR Part 63 - Subpart AA, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-11)
11. 40 CFR Part 63 - Subpart BB, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-12)
12. 40 CFR Part 60 - Subpart V, 40 CFR 60.220 [42 FR 37938, July 25, 1977] [↑](#footnote-ref-13)
13. 40 CFR Part 63 - Subpart AA, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-14)
14. 40 CFR Part 63 - Subpart BB, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-15)
15. 40 CFR Part 60 - Subpart W, 40 CFR 60.230 [42 FR 37938, July 25, 1977] [↑](#footnote-ref-16)
16. 40 CFR Part 63 - Subpart AA, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-17)
17. 40 CFR Part 63 - Subpart BB, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-18)
18. 40 CFR Part 60 - Subpart X, 40 CFR 60.240 [42 FR 37938, July 25, 1977] [↑](#footnote-ref-19)
19. 40 CFR Part 63 - Subpart AA, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-20)
20. 40 CFR Part 63 - Subpart BB, 40 CFR 63.620 [64 FR 31358, Thursday, June 10, 1999] [↑](#footnote-ref-21)
21. 40 CFR Part 60 - Subpart EE, 40 CFR 60.310 [47 FR 49287, Oct. 29, 1982] [↑](#footnote-ref-22)
22. 40 CFR Part 60 - Subpart MM, 40 CFR 60.390 [45 FR 85415, Dec. 24, 1980] [↑](#footnote-ref-23)
23. 40 CFR Part 63 - Subpart IIII, 40 CFR 63.3080 [69 FR 22601, Monday, April 26, 2004] [↑](#footnote-ref-24)
24. 40 CFR Part 60 – Subpart NN, 40 CFR 60.400 [47 FR 16589, Apr. 16, 1982] [↑](#footnote-ref-25)
25. 40 CFR Part 60 - Subpart QQ, 40 CFR 60.430 [47 FR 50649, Nov. 8, 1982] [↑](#footnote-ref-26)
26. 40 CFR Part 63 - Subpart KK, 40 CFR 63.820 [61 FR 27140, May 30, 1996] [↑](#footnote-ref-27)
27. 40 CFR Part 60 - Subpart BBB, 40 CFR 60.540 [52 FR 34874, Sept. 15, 1987] [↑](#footnote-ref-28)
28. 40 CFR Part 63 - Subpart XXXX, 40 CFR 63.5980 [67 FR 45598, Tuesday, July 9, 2002] [↑](#footnote-ref-29)
29. 40 CFR Part 60 - Subpart HHH, 40 CFR 60.600 [49 FR 13651, Apr. 5, 1984] [↑](#footnote-ref-30)
30. 40 CFR 60 Subpart SSS, 40 CFR 60.710 [53 FR 38914, Oct. 3, 1988] [↑](#footnote-ref-31)
31. Background Information for New Source Performance Standards: Primary Copper, Zinc, and Lead Smelters, EPA-450/2-74-002a, October 1974. [↑](#footnote-ref-32)
32. Integrated Pollution Prevention and Control Reference Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers, August 2007. [↑](#footnote-ref-33)
33. International Zinc Association, Zinc Recycling. Downloaded on 11/10/08 from <http://www.iza.com/recycling.html>. [↑](#footnote-ref-34)
34. Company profile of Horsehead Holding Corp. EAF recycling operations. Downloaded on 11/10/08 from <http://www.reuters.com/finance/stocks/companyProfile?rpc=66&symbol=ZINC.O>. [↑](#footnote-ref-35)
35. Zinc Smelting Process overview. Downloaded 11/10/08 from <http://www.nyrstar.com/nyrstar/en/products/productionprocess/>. [↑](#footnote-ref-36)
36. USGS Zinc Statistics and Information taken from <http://minerals.usgs.gov/minerals/pubs/commodity/zinc/> Specific documents used include the Mineral Commodity Summaries (1996-2008), and the Minerals Yearbooks (1994-2006). [↑](#footnote-ref-37)
37. Jeryl Stewart of the TN Dept. of Environment & Conservation reports that the Clarkesville plant *is* subject to the NSPS, and is in fact the *only* primary zinc facility that has *ever* been subject to NSPS, since all the others were constructed prior to promulgation of the NSPS. Contact report, EC/R conversation with Mr. Jeryl Stewart of TN DE&C 11/18/08. [↑](#footnote-ref-38)
38. Horsehead Corporation website. Downloaded on 11/10/08 from <http://www.horsehead.net>. [↑](#footnote-ref-39)
39. ZincOx Resources plc website, parent company of Big River Zinc. Downloaded on 11/6/08 from <http://www.zincox.com/pages/recycling/big_river.htm>. [↑](#footnote-ref-40)
40. 40 CFR 63 Subpart GGGGGG, proposed October 6, 2006 and promulgated Jan 23, 2007 [↑](#footnote-ref-41)
41. “National Emission Standards For Hazardous Air Pollutants; Proposed Standards For Hazardous Air Pollutant Emissions From Magnetic Tape Manufacturing Operations” US EPA, 03/11/94 59 FR 11662 [↑](#footnote-ref-42)
42. “National Emission Standards For Magnetic Tape Manufacturing Operations” US EPA 10/24/05 70 FR 61417 [↑](#footnote-ref-43)
43. “Magnetic and Optical Recording Media Manufacture: 2002”, 2002 Economic Census, Manufacturing Industry Series. U.S. Census Bureau, EC02-311-334613(RV), December 2004. [↑](#footnote-ref-44)