l and 45 mg/l during the sampling and could potentially be considered reflective of secondary treatment (based on 40 CFR 133.102 limitations of 30 mg/l monthly average and 45 mg/l weekly max for secondary treatment), and an additional 2 treatment trains were either trickling filters or waste stabilization ponds that achieved BOD_5 and TSS effluent concentrations between 40 mg/l and 65 mg/l and could potentially be considered equivalent to secondary treatment pursuant to 40 CFR 133.101(g) (based on 40 CFR 133.105 limitations of 45 mg/l monthly average and 65 mg/l weekly maximum). In addition, 15 treatment trains achieved BOD_5 and TSS effluent concentrations below 15 mg/l each, and could potentially be considered greater than secondary treatment.

Using data from these 46 treatment trains only would omit the worst performers in the 50 POTW Study that are probably not reflective of current performance. It might not fully correct, however, for additional upgrades and optimization that may have occurred over the past two decades.

b. *Assessment of Acceptable Data.* EPA developed the pass-through analysis that is the basis for today's proposal using POTW data editing criteria that are generally consistent with those used for the industry data. Specifically, EPA included only data from POTWs for which influent concentrations were 10 times the analytical minimum (quantitation) level (10xML) if available. If none of the average pollutant influent concentrations are at least 10 times the ML, then EPA retained only data from POTWs for which influent concentrations were 2 times the analytical minimum level. Because it is difficult to achieve the same pollutant reduction (in terms of percent) in a dilute wastestream as in a more concentrated wastestream, EPA believes that a 10 X ML editing criteria may overestimate the percent removals that are calculated for both industry and POTWs in the pass-through analysis.

As a general rule, more POTW data than industry data is eliminated through this editing criteria for the specific pollutants that are being examined. This is not surprising since the pass-through analysis would not even be performed on pollutants generally found at less than 10 times the method minimum level in industry since EPA would, in many cases, not require pretreatment for such low levels of a pollutant. As a result of this imbalance (pollutant influent levels at POTWs being less than pollutant influent levels to industrial pretreatment), EPA believes that it is possible that this editing criteria may bias the pass-through results by over-estimating POTW removals where influent concentrations are generally lower. This would result in underestimating the pollutant reductions that are achieved through the regulation of indirect dischargers thereby making the rule appear less cost-effective than it is. On the other hand, there may be little difference in percent removals across the range of influent concentrations generally experienced by POTWs.

One potential solution to this methodological question would be to include data (for both indirect dischargers and POTWs) even if the influent concentration is not 10 times the analytical minimum level. This solution needs to be considered in context, however, with data handling criteria for effluent measurements of ''non-detect'' discussed below.

c. *Assessment of removals when effluent is below the analytical method minimum level.* EPA developed the pass-through analysis that is the basis for today's proposal using the analytical method minimum level as the effluent value when the pollutant was not detected in the effluent. This is the approach that is generally used when developing pollutant reduction estimates for the regulation, performing cost-effectiveness calculations, and developing effluent limitations. EPA believes that this methodology may underestimate the performance of the selected technology option for both directs and indirects. Once again, this would result in underestimating the removals estimated for *direct* dischargers, and thereby making the rule appear less cost-effective than it is. indirect dischargers, EPA believes that the overall effect of using the minimum level for non-detect values for both industry and POTW data creates a bias for underestimating POTW removals in comparison to industry removals. This may result in an overestimation of pollutant removals by indirect dischargers, and may make the rule appear more cost-effective than it is. (Note that this problem is minimized by only using data with influent levels exceeding 10 X ML, because a non-detect assures that at least 90 percent of the pollutant has been removed. It is arguably less important that the true removal may be greater than 90 percent, rather than exactly 90 percent. Using a less stringent editing criteria of 2 X ML as discussed above would exacerbate this problem. If the influent were only 2 X ML, then removals greater than 50 percent could never be measured.)

One potential alternative would be to assume a value of one half of the minimum level for effluent values of non-detect. This approach would have to be applied uniformly for the indirect dischargers as well as the POTWs in order for the percent removal calculations to be reasonable.

a more detailed discussion of alternative approaches to the POTW pass-through analysis, see the Technical Development Document, Section X. EPA solicits comment on the significance of each of these methodological issues and the potential alternatives.

4. Determination of Long Term Averages, Variability Factors, and Effluent Limitations Guidelines and Standards

This subsection describes the statistical methodology used to develop long-term averages, variability factors, and limitations for BPT, BCT, BAT, NSPS, PSES, and PSNS. The same basic procedures apply to the calculation of all effluent limitations guidelines and standards for this industry, regardless of whether the technology is BPT, BCT, BAT, NSPS, PSES, or PSNS. simplicity, the following discussion refers only to effluent limitations guidelines; however, the discussion also applies to new source and pretreatment standards.

The proposed limitations for pollutants for each option, as presented in today's notice, are provided as ''daily maximums'' and ''maximums for monthly averages.'' Definitions provided in 40 CFR 122.2 state that the daily maximum limitation is the ''highest allowable 'daily discharge '''' and the maximum for monthly average limitation is the ''highest allowable average of 'daily discharges' over a calendar month, calculated as the sum of all 'daily discharges' measured during a calendar month divided by the number of 'daily discharges' measured during that month.'' Daily discharges are defined to be the '' 'discharge of a pollutant' measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.''

EPA calculates the limitations based upon percentiles chosen with the intention, on one hand, to accommodate reasonably anticipated variability within the control of the facility and, on the other hand, to reflect a level of performance consistent with the Clean Water Act requirement that these effluent limitations be based on the ''best'' technologies. The daily maximum limitation is an estimate of the 99th percentile of the distribution of the daily measurements. The maximum for monthly average limitation is an

estimate of the 95th percentile of the distribution of the monthly averages of the daily measurements. The percentiles for both types of limitations are estimated using the products of long-term averages and variability factors.

In the first of two steps in estimating both types of limitations, EPA determines an average performance level (the ''long-term average'') that a facility with well-designed and operated model technologies (which reflect the appropriate level of control) is capable of achieving. This long-term average is calculated from the data from the facilities using the model technologies for the option. EPA expects that all facilities subject to the limitations will design and operate their treatment systems to achieve the long-term average performance level on a consistent basis because facilities with well-designed and operated model technologies have demonstrated that this can be done. In the second step of developing a limitation, EPA determines an allowance for the variation in pollutant concentrations when processed through well designed and operated treatment systems. This allowance for variance incorporates all components of variability including process and wastewater generation, sample collection, shipping, storage, and analytical variability. This allowance is incorporated into the limitations through the use of the variability factors, which are calculated from the data from the facilities using the model technologies. If a facility operates its treatment system to meet the relevant long-term average, EPA expects the facility to be able to meet the limitations. Variability factors assure that normal fluctuations in a facility's treatment are accounted for in the limitations. By accounting for these reasonable excursions above the long-term average, EPA's use of variability factors results in limitations that are generally well above the actual long-term averages. The data sources, the selection of pollutants and data, and the calculations of pollutant long-term averages and variability factors are briefly described below. More detailed explanations are provided in the technical development document.

EPA recognizes that, as a result of modifications to 40 CFR part 420, some dischargers that consistently meet effluent limitations based on the current regulation may need to improve treatment systems, process controls, and/or treatment system operations in order to consistently meet effluent limitations based on revised effluent limitations guidelines and standards. EPA believes that this consequence is consistent with the Clean Water Act statutory framework, which requires that discharge limitations reflect the best available technology, and that the best available technology should be redefined periodically.

The long-term averages, variability factors, and limitations were based upon pollutant concentrations collected from three data sources: EPA sampling episodes, the 1997 Analytical and Production follow-up survey, and data submitted by industry. When the data from the EPA sampling episodes at a facility met the data editing criteria, EPA used the sampling data and any monitoring data provided by the facility. See Technical Development Document Section 10 for more information.

5. BPT

In general, the BPT technology level represents the average of the best existing performances of plants of various processes, ages, sizes or other common characteristics. Where existing performance is considered uniformly inadequate, BPT may be transferred from a different subcategory or industry. Limitations based upon transfer of technology must be supported by a conclusion that the technology is indeed transferable and a reasonable prediction that it will be capable of meeting the prescribed effluent limits. See *Tanners' Council of America* v. *Train,* 540 F.2nd 1188 (4th Cir. 1976). BPT focuses on end-of-pipe treatment rather than process changes or internal controls, except where the process changes or internal controls are common industry practice.

The cost-benefit inquiry for BPT is a limited balancing, committed to EPA's discretion, which does not require the Agency to quantify the benefits in monetary terms. In balancing costs in relation to effluent reduction benefits, EPA considers the volume and nature of existing discharges expected after the application of BPT, the general environmental effects of the pollutants, and the cost and economic impact of the required pollution controls. When setting BPT limitations, EPA is required under section 304(b) to perform a limited cost-benefit balancing to ensure the costs are not wholly out of proportion to the benefits achieved. See *Weyerhaeuser Company* v. *Costle,* 590 F.2d 1011 (D.C. Cir. 1978).

a. *New Subcategories/Segments.* EPA proposes to promulgate BPT limitations for conventional pollutants (TSS and/or oil & grease) for the following subcategories or segments that have not previously been regulated under part 420: Non-recovery cokemaking; sintering operations with dry air pollution controls; electric arc furnace operations within the Non-Integrated Steelmaking and Hot ming Subcategory; direct reduced iron; forging; and, briquetting. There are no BPT limitations in the current regulation applicable to non-recovery cokemaking, direct reduced iron, forging and briquetting. The current Steelmaking Subcategory BPT regulation requires ''no discharge of pollutants'' for semi-wet electric arc furnace operations (§ 420.43(a)) and allows discharges for wet electric arc furnace operations (§ 420.43(c)). Under the proposed subcategorization scheme, there are no wet electric arc furnace operations within the Non-Integrated Steelmaking and Hot ming Subcategory. The current BPT regulation does not specifically cover sintering operations with dry air pollution controls.

b. *Existing Subcategories/Segments.* manufacturing operations subject to current BPT regulations (i.e., all iron and steel operations regulated under the current part 420 and electroplating operations regulated currently under part 433 but proposed for regulation under the revised Part 420), the Agency at this time is not proposing to revise the BPT limitations for TSS and oil & grease. Because EPA is proposing to establish a revised subcategorization schedule for part 420 by consolidating several former subparts and creating new ones, EPA has presented the current part 420 BPT limitations for each proposed subpart in the form of segments corresponding to the subcategorization schedule that EPA proposes to replace. With respect to continuous electroplating operations, which are currently regulated under part 433 (Metal Finishing), but which EPA proposes to regulate under part 420 (Iron & Steel), EPA presents BPT limitations for the conventional parameters TSS and oil and grease in proposed subpart F, §§ 420.62(a)(9) and (b)(9) based on the limitations as currently codified in part 433 for those operations.

The Agency is also considering an alternative approach that would simplify the regulation and ease implementation of BPT limitations in the NPDES permit program. The Agency solicits comment on this alternative approach, which is discussed below. The alternative is also presented in the Technical Development Document for this proposed regulation.

j. *Alternative approach: Codify BPT limitations as the TSS and O&G Concentrations used to develop the Current part 420 Regulation.* The Agency is aware that incorporating the current BPT limitations into the new

subcategorization structure of the proposed regulation is complex and will be difficult to implement because the BPT limitations are unchanged and reflect a different subcategorization schedule. If the regulation were promulgated as proposed, permit writers and the industry would be required to implement the existing part 433 BPT limitations, existing part 420 BPT limitations for 12 subcategories and more than 50 segments, as well as the proposed BAT limitations for seven subcategories with far fewer segments. As a result, permit writers would need to identify process units using different characteristics for BPT than they would use for BAT and other technology levels. Therefore, EPA is considering an alternative approach that EPA believes would ease implementation of BPT limitations in the NPDES permit program.

Under this alternative approach, EPA would replace the current mass-based BPT limitations for TSS and oil & grease with corresponding concentration-based limitations for TSS and oil & grease. The concentration-based BPT limitations would be the treated effluent concentrations used to develop the current regulation for all operations EPA proposes to continue to regulate under the revised part 420 regulations. (Thus, this option would not apply to Cold Worked Pipe & Tube operations currently subject to part 420, but which EPA proposes to regulate under Part 438. Those concentrations are shown as the daily maximum and maximum monthly average TSS and oil & grease concentrations (mg/L) for the 12 subcategories of the existing regulation (see Table I–1 (pages 13 to 17), Vol. I of the ''Development Document for Effluent Limitations Guidelines for the Iron and Steel Manufacturing Point Source Category,'' (EPA 440/1–82–024; May 1982)). electroplating operations regulated currently under part 433, the corresponding BPT concentration limitations would be either those listed at part 433, or those for the steel finishing operations listed in Table I–1 referenced above.

Under this option, the TSS and oil & grease concentrations listed in the 1982 development document would be codified as BPT limitations in the seven subcategories proposed for this regulation. Because the TSS and oil & grease concentrations used to develop the 1982 regulation are the same for operations within each of the seven subcategories for this proposed regulation, the structure of the revised regulation would be streamlined and implementation would be much simpler. example, permit writers and the industry would not have to contend with classifying hot forming and steel finishing operations under both the more complicated subcategory and segment schedule from the current regulation and the less complicated subcategory and segment schedule from this proposed regulation.

Under this option, the permit writers would develop NPDES permit effluent limitations by first applying the corresponding BAT limitations for toxic and non-conventional pollutants for each internal or external outfall discharging process wastewaters. Mass effluent limitations for TSS and oil & grease would be developed by applying the respective concentration-based BPT effluent limitations guidelines to a reasonable measure of actual process wastewater discharge flow, taking into account process wastewaters regulated directly by Part 420 and those process wastewaters that may be unregulated by part 420 (see proposed regulation at § 420.03(f)). As with the BAT limitations, the Agency intends that only the mass limitations derived for TSS and oil & grease as described above be included in NPDES permits.

Depending upon site-specific circumstances, this option could result in either more or less stringent limitations for TSS and oil & grease than would be derived from the current BPT limitations. example, if a mill has process wastewater discharge flows lower than the model BPT production normalized flows from the 1982 regulation and no unregulated process wastewaters, the resulting TSS and oil & grease permit limitations would be more stringent in proportion to the amount of the lower discharge flow. On the other hand, if the mill had higher process wastewater flows or a substantial volume of unregulated process wastewaters, the resultant effluent limitations would be higher in proportion to the higher discharge flow. The Agency believes that in many instances the volume of regulated process wastewaters currently discharged or that will be discharged to attain compliance with the BAT limitations will be somewhat less than the model BPT flow rates. Consequently, on balance, EPA expects that the resulting NPDES permit effluent limitations for TSS and oil & grease would be somewhat more stringent but in the range of those derived from the current BPT limitations.

Under this approach, as a practical matter, there would be no additional costs of compliance to achieve the resulting BPT TSS and oil & grease effluent limitations. Incremental investment costs and incremental operation and maintenance costs were considered, where appropriate, as costs to achieve the BAT limitations. In addition, EPA would not expect facilities to incur additional monitoring costs associated with concentration-based BPT limitations because facilities already monitor for these pollutants under the current regulation, and EPA does not propose to establish any new monitoring requirements for the conventional pollutants. Nonetheless, for the purposes of calculating cost per pound of conventional pollutants removed, EPA has estimated both the costs associated with implementing new BPT technologies (in this case, identical to the proposed BAT technologies, even though as a practical matter, they are already subsumed in the BAT costs), as well as the total pounds removed by those technologies. (These totals reflect only the subcategories and segments for which EPA is considering revising BPT limitations.) The total estimated costs are $53.8 million (1997 pretax total annualized costs) and the total estimated removals are 30.3 million pounds of conventional pollutants. EPA believes these costs to be reasonable in relation to the effluent reduction benefits. If EPA were to adopt this alternative approach, EPA would revise BCT limitations to reflect the new BPT levels because nothing more stringent that those levels appears to pass the BCT cost test.

EPA solicits comments on this alternative approach, which EPA believes would ease the implementation of the BPT limitations and would reflect current manufacturing, waste management, and wastewater treatment practices. EPA also solicits other options for consideration.

6. BCT

The BCT methodology, promulgated in 1986 (51 FR 24974), discusses the Agency's consideration of costs in establishing BCT effluent limitations guidelines. EPA evaluates the reasonableness of BCT candidate technologies (those that are technologically feasible) by applying a two-part cost test:

(1) The POTW test; and

(2) The industry cost-effectiveness test.

In the POTW test, EPA calculates the cost per pound of conventional pollutant removed by industrial dischargers in upgrading from BPT to a BCT candidate technology and then compares this cost to the cost per pound of conventional pollutant removed in upgrading POTWs from secondary treatment. The upgrade cost to industry

must be less than the POTW benchmark of $0.25 per pound (in 1976 dollars).

In the industry cost-effectiveness test, the ratio of the incremental BPT to BCT cost divided by the BPT cost for the industry must be less than 1.29 (*i.e.,* the cost increase must be less than 29 percent).

In developing BCT limits, EPA considered whether there are technologies that achieve greater removals of conventional pollutants than proposed for BPT, and whether those technologies are cost-reasonable according to the prescribed BCT tests. EPA identified no technologies that can achieve greater removals of conventional pollutants than the BPT standards that also pass the BCT cost-reasonableness tests. Accordingly, EPA proposes to establish BCT effluent limitations equal to the current BPT limitations.

7. Consideration of Statutory Factors for BAT, PSES, NSPS and PSNS Technology Options Selection

Based on the record before it, EPA has determined that each proposed model technology is technically available. EPA is also proposing that each is economically achievable for the segment to which it applies. Further, EPA has determined, for the reasons set forth in Section VIII, that none of the proposed technology options has unacceptable adverse non-water quality environmental impacts. Finally, EPA has determined that each proposed technology option achieves greater pollutant removals than any other economically achievable technology considered by EPA and, for that reason, also represents the best technology among those considered for the particular segment. EPA also considered the age, size, processes, and other engineering factors pertinent to facilities in the proposed segments for the purpose of evaluating the technology options. None of these factors provides a basis for selecting different technologies than those EPA proposes to select as its model BAT and PSES technologies for the segments within each subcategory, or if EPA does not propose segmentation, for the subcategory itself.

In selecting its proposed NSPS technology for these segments and subcategories, EPA considered all of the factors specified in CWA section 306, including the cost of achieving effluent reductions. (These findings also apply to the proposed PSNS for these segments.) The proposed NSPS technologies for these segments are presently being employed at facilities in each segment of these subcategories. Therefore, EPA has concluded that such costs do not present a barrier to entry. The Agency also considered energy requirements and other non-water quality environmental impacts for the proposed NSPS options and concluded that these impacts were no greater than for the proposed BAT technology options for the particular segment and are acceptable. EPA therefore concluded that the NSPS technology bases proposed for these segments constitute the best available demonstrated control technology for those segments.

B. Cokemaking

After considering all of the technology options described in the Section V.C in light of the factors specified in section 304(b)(2)(B) and 306 of the Clean Water Act, as appropriate, EPA proposes to select the technology options identified below as BAT, PSES, NSPS, and PSNS for the by-product and non-recovery cokemaking segments of the proposed Cokemaking Subcategory.

1. By-Product Cokemaking

a. *Regulated Pollutants.* i. *BAT.* the By-Product segment of this subcategory, EPA proposes establishing BAT limitations for ammonia-N, total cyanide, phenol, benzo(a)pyrene, thiocyanate, naphthalene, mercury, selenium, and Total Residual Chlorine (TRC). Except for TRC, these pollutants are characteristic of cokemaking wastewaters. TRC is an indicator of post-alkaline chlorination residual concentration of chlorine. Facilities would not need to meet the TRC limit if they certify to the permitting authority that they do not employ alkaline chlorination in their wastewater treatment. These proposed regulated pollutants are key indicators of the performance of the ammonia distillation, biological treatment, and alkaline chlorination processes, which are the key components of the complex model BAT and NSPS treatment systems for by-product coke plants.

ii. *PSES.* EPA proposes to regulate the following parameters under PSES: ammonia-N, total cyanide, thiocyanate, selenium, phenol, and naphthalene. Using the methodology described in Section IX.A.2, EPA has determined that each of these pollutants passes through. EPA notes that ammonia-N is a key indicator of the performance of the PSES and PSNS treatment systems because it reflects the performance of the ammonia stills, which not only control ammonia-N, but also acid gasses (HCN, H_2S) and volatile toxic organic pollutants (benzene, toluene, xylenes), some portions of which would otherwise be lost in coke plant and municipal sewer systems and in biological processes at POTWs. EPA has determined that the other pollutants EPA proposes to regulate at BAT (benzo(a)pyrene and mercury) do not pass through.

iii. *NSPS.* NSPS limitations, EPA proposes to regulate the same pollutants as those for BAT, with the addition of TSS and oil and grease (measured as HEM).

iv. *PSNS.* EPA proposes to regulate the same parameters as under PSES for this segment.

b. *Technology Selected.* i. *BAT.* The Agency is proposing to establish BAT–3 for the by-products recovery segment of the cokemaking subcategory. The treatment technologies that serve as the basis for the development of the proposed BAT limits are: Tar removal, equalization, ammonia stripping, temperature control, equalization, single-stage biological treatment with nitrification, and alkaline chlorination. EPA estimates that only one facility will close as a result of BAT–3. EPA has determined that this option is economically achievable and cost effective.

As presented in Section V.C.1, four BAT options were under consideration. Under BAT–1, water usage would be reduced by 1.6 million gallons per year from current levels and the removal toxic and non-conventional pollutants would increase by 14% over those levels. BAT–2 results in no further reduction in flow beyond that to be achieved by BAT–1, but does result in the additional removal of 17% of the total cyanide from direct discharging cokemaking wastestreams through the use of cyanide precipitation. BAT–3 also results in no further reduction in flow beyond that to be achieved by BAT–1, but does result in the additional removal of 50% of the total cyanide from direct discharging cokemaking wastestreams beyond BAT–1 levels through the use of alkaline chlorination. BAT–4 results in no further reduction in flow beyond that to be achieved by any of the BAT options, and does not lead to significant additional pollutant removal beyond that to be achieved by BAT–3.

BAT–1 removes 56,300 toxic pound equivalents over current discharge at an annualized compliance cost of $0.9 million (1997$). BAT–2 removes an additional 26% of toxic pound equivalents over BAT–1, at an additional annualized compliance cost of $3.3 million (1997$). Neither of these options results in any facility closures, so both are considered economically achievable. However, EPA is not proposing either of these options,

because BAT–3 removes even more pollutants of concern at a cost that is also economically achievable.

EPA also evaluated BAT–4 as a basis for establishing BAT more stringent than the level of control being proposed today. As was the case for BAT–3, EPA estimates that only one facility would close as a result of BAT–4, so EPA has determined that this option is economically achievable. However, EPA is not proposing to establish BAT limits based on BAT–4 because it determined that BAT–3 achieves nearly equivalent reductions in pound-equivalents for much less cost. EPA has determined that BAT–3 would remove 0.43 million pounds of priority and non-conventional pollutants per year at a total annualized cost of $8.6 million (1997$). In contrast, BAT–4 would remove the same quantity of pollutants at a total annualized cost of $15.2 million (1997$). In view of the fact that BAT–4 appears to achieve no additional pollutant removals and yet would prompt additional total annualized costs of $6.6 million, EPA has determined that BAT–3, not BAT–4, is the ''best available'' technology economically achievable for the by-products recovery segment of the cokemaking subcategory.

ii. *PSES.* EPA is co-proposing two sets of technologies to serve as the bases for the development of the proposed PSES limits: (1) Tar removal, equalization, ammonia stripping, temperature control and equalization, and (2) tar removal, equalization, ammonia stripping, temperature control, equalization, and single-stage biological treatment with nitrification. These are identified as options PSES–1 and PSES–3 in Section V.C., respectively, and provide controls for each pollutant that EPA has determined pass through. EPA estimates that no facilities would close as a result of compliance with either of these options. EPA has concluded that these options are economically achievable.

Under Option PSES–1, EPA estimates an additional 3,400 toxic pound equivalents would be removed per year above the current amount, at an additional annualized compliance cost of $0.3 million (1997$). Under Option PSES–2, EPA estimates an additional 2,200 toxic pound equivalents would be removed per year above PSES–1, at an additional annualized compliance cost of $1.9 million (1997$). Under PSES–3, EPA estimates an additional 42,900 toxic pound equivalents would be removed per year above PSES–2, at an additional annualized compliance cost of $2.8 million (1997$). Under PSES–4, EPA estimates an additional 2,900 toxic pound equivalents would be removed per year above PSES–3, at an additional annualized compliance cost of $3.5 million (1997$). Based on consideration of the additional pollutant removals achieved by PSES–4 for indirect dischargers in this subcategory and the additional costs needed to achieve them, EPA has determined that PSES–3 is the best technology for the by-products recovery segment of the cokemaking subcategory.

Although EPA considers PSES–3 to be the best among the PSES options EPA considered, EPA is also co-proposing PSES–1 because it may provide a lower cost means of obtaining similar pollutant reductions. EPA plans to further evaluate setting PSES equal to BAT–3 between proposal and promulgation of this rule.

iii. *NSPS.* The treatment technologies that serve as the basis for the development of the proposed NSPS are the same as Option BAT–3. the reasons set forth above for BAT in its comparison of BAT–3 and BAT–4, EPA has determined that BAT–3 is the ''best'' demonstrated technology for new sources in the by-products recovery segment of the cokemaking subcategory.

iv. *PSNS.* The treatment technologies that serve as the basis for the development of the proposed PSNS are the same as Option PSES–3. the reasons discussed above, EPA proposes PSES–3 as the basis for its PSNS for this segment. The Agency also solicits comment on the second option discussed under PSES for this segment, identified as option PSES–1. EPA plans to further evaluate setting PSNS equal to BAT–3 between proposal and promulgation of this rule.

2. Non-recovery Cokemaking

Since the non-recovery cokemaking process does not generate any process wastewater, EPA proposes no discharge of process wastewater pollutants to waters of the U.S. for BAT/PSES/NSPS/PSNS for all categories for this segment.

C. Ironmaking

After considering all of the technology options described in the Section V.C in light of the factors specified in section 304(b)(2)(B) and 306 of the Clean Water Act, as appropriate, EPA proposes to select the technology options identified below as BAT, PSES, NSPS, and PSNS for the blast furnace and sintering segments of the proposed Ironmaking Subcategory.

1. Blast Furnace

a. *Regulated Pollutants.* i. *BAT.* EPA proposes to regulate the following parameters under BAT: Ammonia-N, total cyanide, phenol, lead, zinc, and total recoverable chlorine (TRC). Ammonia-N and total cyanide are regulated in the current part 420 and are again proposed for regulation. These pollutants are characteristic of blast furnace ironmaking wastewaters and are key indicators of the performance of the alkaline chlorination process. Phenol is proposed for regulation in place of total phenols, because EPA judged phenol to be a better indicator of treatment performance of ironmaking wastewater than total phenols. EPA proposes to limit TRC to ensure residual concentrations of chlorine are kept to a minimum to avoid effluent toxicity. Facilities would not need to meet the TRC limit if they certify to the permitting authority that they do not employ alkaline chlorination in their wastewater treatment. EPA proposes to limit lead and zinc because they are the principal metals present and will track performance of the metals precipitation model BAT system with respect to other metals identified as pollutants of concern.

ii. *PSES.* EPA proposes to regulate the following parameters under PSES: ammonia-N, lead, and zinc. Using the methodology described in Section IX.A.2, EPA has determined that each of these pollutants passes through. EPA has determined that the other pollutants EPA proposes to regulate at BAT (total cyanide and phenol) do not pass through.

iii. *NSPS.* In addition to the parameters listed under BAT for this segment, EPA proposes to regulate TSS and oil & grease (measured as HEM).

iv. *PSNS.* EPA proposes to regulate the same parameters under PSNS for this segment as it does for PSES.

b. *Technology Selected.* i. *BAT.* The treatment technologies that serve as the basis for the development of the proposed BAT limits for the ironmaking subcategory (Blast Furnace and Sintering Segments) are: solids removal with high-rate recycle and metals precipitation, alkaline chlorination, and mixed-media-filtration for the blowdown wastewater. This is identified as BAT–1 in Section V.C. Under BAT–1, water usage would be reduced by 5% over current levels, and total loadings of toxic and non-conventional pollutants would be reduced by 68%. EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. EPA did not pursue additional, more stringent options because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any other add-on technology. Therefore, EPA proposes BAT–1 as the technology

basis for BAT for the ironmaking subcategory.

ii. *PSES.* The treatment technologies that serve as the basis for the development of the proposed PSES limits are: solids removal with high-rate recycle and metals precipitation for the blowdown wastewater. This is identified as Option PSES–1 in Section V.C. This option provides controls for each pollutant that EPA has determined passes through for this segment. EPA has determined that this option is economically achievable. Although BAT–1 achieves additional removal of ammonia-N through alkaline chlorination, EPA has found that all POTWs currently receiving wastewater from ironmaking operations are achieving ammonia removal comparable to that achieved by BAT–1. Therefore, EPA proposes PSES–1 as the technology basis for PSES for the ironmaking subcategory.

EPA is proposing regulatory flexibility that would allow indirectly discharging ironmaking operations to not have to meet the pretretment standards for ammonia-N if the facility certifies to the pretreatment control authority under 40 CFR 403.12 that they discharge to POTWs with the capability, when considered together with the indirect discharger's removals, to achieve removals at least equivalent to those expected under BAT for ammonia-N.

EPA plans to further evaluate setting PSES equal to BAT–1 between proposal and promulgation of this rule.

iii. *NSPS.* The treatment technologies that serve as the basis for the development of the proposed NSPS limits are the same as Option BAT–1 for this segment. As was the case for BAT, EPA did not pursue additional, more stringent options for NSPS because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by this or any other add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for NSPS for the ironmaking subcategory because EPA believes it represents the best demonstrated technology for this subcategory.

iv. *PSNS.* The treatment technologies that serve as the basis for the development of the proposed PSNS limits are the same as Option PSES–1 for this segment. the reasons set forth above for NSPS, EPA proposes PSES–1 as the basis for PSNS for this subcategory.

EPA is proposing regulatory flexibility that would allow indirectly discharging ironmaking operations to not have to meet the pretreatment standards for ammonia-N if the facility certifies to the pretreatment control authority under 40 CFR 403.12 that they discharge to POTWs with the capability, when considered together with the indirect discharger's removals, to achieve removals at least equivalent to those expected under BAT for ammonia-N.

EPA plans to further evaluate setting PSNS equal to BAT–1 between proposal and promulgation of this rule.

2. Sintering

a. *Regulated Pollutants.* Because several congeners of dioxins have been shown to cause adverse health effects at concentration levels far below those of most pollutants, EPA proposes to regulate 2,3,7,8-tetra-chloro-dibenzo furan (TCDF). EPA selected this congener because sampling data indicates that it is present in post-treatment sinter plant wastewater, and because removal of this pollutant is expected to correlate strongly with removal of other dioxin congeners, due to their similar chemical structures. EPA's sampling program did not indicate that there are measurable quantities of 2,3,7,8-tetra-chloro-dibenzo dioxin (TCDD) in post-treatment sinter plant wastewater. The proposed limit would be expressed as less than the minimum level (''<ML'') or ten parts per quadrillion using current analytical methods. The ''ML'' is an abbreviation for the minimum level of the analytical method for TCDF specified in 40 CFR part 136. EPA proposes to require compliance monitoring at internal outfalls (after treatment of sinter plant wastewaters separately or in combination with blast furnace wastewaters), i.e., before any additional process or non-process flows are combined with the sinter plant wastewater. This regulatory approach is similar to that used in the regulation of the bleached paper grade plant effluents at bleached kraft pulp and paper mills (see 40 CFR 430.24(e)). EPA expects to gather additional information on dioxin and furan concentrations in sinter plant effluent and on this proposed regulatory approach through the public comment process. EPA also is willing to speak with interested parties during the comment period to ensure that EPA considers the views of all stakeholders and uses the best possible data upon which to base a decision for the final regulation.

i. BAT

EPA proposes to regulate the following parameters under BAT: ammonia-N, total cyanide, phenol, lead, zinc, TRC and 2,3,7,8 TCDF. EPA proposes to regulate ammonia-N, total cyanide and phenol in order to track performance of the BAT model treatment technology, which includes alkaline chlorination. EPA proposes to regulate TRC in order to ensure residual concentrations of chlorine are kept to a minimum to avoid effluent toxicity. Facilities would not need to meet the TRC limit if they certify to the permitting authority that they do not employ alkaline chlorination in their wastewater treatment. EPA proposes to regulate lead and zinc because they are the principal metals present and will track performance of the metals precipitation model BAT system with respect to other metals identified as pollutants of concern.

ii. PSES

EPA proposes to regulate the following parameters under PSES: ammonia-N, lead, zinc, and 2,3,7,8 TCDF. Using the methodology described in Section IX.A.2, EPA has determined that each of these pollutants passes through. EPA has determined that the other pollutants EPA proposes to regulate at BAT (cyanide and phenol) do not pass through.

iii. NSPS

In addition to the parameters listed under BAT for this segment, EPA proposes to regulate TSS and oil & grease (measured as HEM).

iv. PSNS

EPA proposes to regulate the same parameters under PSNS for this segment as it does for PSES.

b. *Technologies Selected.*

i. BAT/PSES/NSPS/PSNS

See discussions under ''Blast Furnace'' above.

D. Integrated Steelmaking

After considering all of the technology options described in the Section V.C in light of the factors specified in section 304(b)(2)(B) and 306 of the Clean Water Act, as appropriate, EPA proposes to select the technology options identified below as BAT, PSES, NSPS, and PSNS for the proposed Integrated Steelmaking Subcategory.

1. Regulated Pollutants

a. *BAT/PSES/NSPS/PSNS.* EPA proposes to regulate lead and zinc under BAT/PSES/NSPS/PSNS because they are the principal metals present and because they are good indicators of the performance of the metals precipitation component of the proposed model technology. Using the methodology described in Section IX.A.2, EPA has determined that both lead and zinc pass through.

2. Technology Selected

a. *BAT/NSPS/PSES/PSNS.* The treatment technologies that serve as the basis for the development of the proposed BAT/NSPS/PSES/PSNS limits are: solids removal and high rate recycle, with metals precipitation for blowdown wastewater. Cooling towers are also part of the model technology for process wastewater associated with vacuum degassing or continuous casting. This option is identified as BAT–1 in Section V.C.

Under BAT–1, water usage can be reduced by 83% over current levels, and total loadings of toxic and non-conventional pollutants can be reduced by 66%. EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. EPA did not pursue other options because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any other add-on technologies. Therefore, EPA proposes BAT–1 as the technology basis for BAT for the proposed Integrated Steelmaking subcategory.

the same reason, EPA proposes BAT–1 as the basis for PSES for this subcategory. This option provides controls for each pollutant that EPA has determined passes through for this subcategory.

As was the case for BAT and PSES, EPA did not pursue additional, more stringent options for NSPS and PSNS because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any other add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for NSPS and PSNS for the integrated steelmaking subcategory because EPA believes it represents the best demonstrated technology for this subcategory.

E. Integrated and Stand Alone Hot ming

After considering all of the technology options described in the Section V.C in light of the factors specified in section 304(b)(2)(B) and 306 of the Clean Water Act, as appropriate, EPA proposes to select the technology options identified below as BAT, PSES, NSPS, and PSNS for the carbon and allow segment and the stainless steel segment of the proposed Integrated and Stand Alone Hot ming Subcategory.

1. Carbon and Alloy

a. *Regulated Pollutants.* i. *BAT.* EPA is proposing to regulate the following pollutants: lead and zinc.

ii. *PSES/PSNS.* See discussion under ''Technology Selected—PSES/PSNS'' below.

iii. *NSPS.* EPA is proposing regulating the same pollutants as for BAT, with the addition of TSS and oil & grease (measured as HEM).

b. *Technology Selected.* i. *BAT.* EPA is proposing two different BAT approaches today because of the uncertainty regarding the economic achievability of the preferred option in April 2002 when EPA is scheduled to take final action on this proposal.

BAT Option A: The treatment technologies that serve as the basis for the development of BAT Option A are: scale pit with oil skimming, roughing clarifier, cooling tower with high rate recycle and mixed-media filtration of blowdown. As required by CWA section 301(b)(2), each existing direct discharger subject to this proposed BAT would be subject to the corresponding limitations as soon they are incorporated into the facility's NPDES permit. EPA believes the BAT Option A is economically achievable because the facility level analysis projects no facility closures. The firm level analysis does, however, project that one or more firms may experience financial ''distress'' as a result of the aggregate compliance costs of the rule, including the hot forming segment compliance costs. Financial ''distress'' may indicate the loss of financial independence, sale of assets or the likelihood of bankruptcy. In this case, the facility level analysis indicates the facilities would be expected to remain viable postcompliance and would possess value as continuing concerns. Therefore, EPA expects that the firm(s) would respond to financial ''distress'' through the sale of assets, rather than through declaration of bankruptcy, which would be far more disruptive in terms of economic impacts for the subcategory as a whole. example, job losses would be more limited in the event of the sale of a facility owned by a distressed firm rather than a bankruptcy induced closure and any community impacts associated with job losses would likewise be less severe. The Agency believes that this projected level of financial distress is not significant and therefore believes that Option A is economically achievable for the segment as a whole.

BAT Option B: As discussed in more detail above in Section V.C.4.b, Section VI.D.4, and Section VI.F, EPA has estimated that it could cost affected facilities $ 21.2 million in total annualized costs to comply with BAT limitations based on the proposed BAT model technology, which includes high rate recycle. When those costs are considered together with other costs that EPA estimates firms will incur if this rule is promulgated as proposed, EPA has predicted that the cumulative costs of this rule could jeopardize the corporate financial health of one or more firms. See Section VI.F. While EPA considers those possible impacts to be acceptable for the purposes of today's proposal, EPA is also aware that new information received after this proposal, including information regarding changes in the financial health of the industry due to changes in the national economy and foreign trade, might lead EPA to reach a different conclusion when EPA takes final action on this proposal in April 2002. Therefore, in addition to proposed BAT Option A for the carbon and alloy segment of the Integrated and Stand Alone Hot ming subcategory, EPA is proposing a second BAT approach for this segment. EPA is considering BAT limitations for this segment based on BAT Option B in the event it determines that BAT Option A is not economically achievable for the segment as a whole at the time it takes final action on today's proposal. The proposed alternative described below is designed to minimize possible adverse economic impacts of the primary proposed BAT option for this segment.

Like the BAT option A, BAT Option B includes high rate recycle. (Indeed, the technology basis for BAT Option A and the proposed alternative is identical.) The difference between BAT Option A and BAT Option B involves the amount of time that facilities in the segment would have to achieve the BAT limitations based on that technology. Under BAT option A, all direct discharging facilities covered by the carbon and alloy segment of the Integrated and Stand Alone Hot ming subcategory would be subject to the BAT limitations as soon as they are placed in the facilities' NPDES permit. See sections 301(b)(2)(C), (D) and (F) of the Clean Water Act. Although it is common practice for permit writers to issue administrative orders concurrent with issuing permits based on a new or revised effluent guideline, the decision to do so is left to the permit writers' enforcement discretion. Therefore, EPA cannot assume the availability of such relief when it estimates the costs and impacts of this proposed rule. Under BAT Option B, in contrast, all facilities within the carbon and alloy segment of the Integrated and Stand Alone Hot ming subcategory could receive additional time to achieve the limitations based on the proposed BAT technology for that segment. If EPA ultimately determines in April 2002 that

BAT Option A is not economically achievable for the segment as a whole, it may decide to take final action based on BAT Option B.

Under BAT Option B, EPA would codify BAT limitations that consisted of three separate components. Together, the three components would comprise BAT for the carbon and alloy segment of the Integrated and Stand Alone Hot ming subcategory and, operating incrementally, would become progressively more stringent over time. Although applied in stages, the limitations would represent a continuum of progress that all facilities under BAT Option B would be required to achieve by April 30, 2007. Under the first component, consisting of ''stage 1'' BAT limitations, each facility subject to this segment would be immediately subject to limitations based on the mill's existing effluent quality for the regulated pollutants, or its current technology-based permit limits for those pollutants, whichever are more stringent. The second component would consist of enforceable interim milestones developed on a best professional judgment basis by the permitting authority to reflect reasonable interim milestones toward achievement of the ultimate BAT limitations. Under the third component, consisting of the ultimate, or ''stage 2'', BAT limitations, each facility by April 30, 2007 would be subject to limitations that are based on the BAT technology proposed for this segment (*i.e.,* scale pit with oil skimming, roughing clarifier, filtration, high rate recycle and mixed-media filtration of blowdown).

With respect to the ''stage 1'' limitations, EPA intends that the permitting authority would express that limitation in numeric form for each facility on a case-by-case basis. The ''stage 1'' limitations thus will be numeric values on the regulated pollutants, that, for each pollutant, are equivalent to the more stringent of either the technology-based limit on that pollutant in the facility's last permit or the facility's current effluent quality with respect to that pollutant. Existing effluent quality for the regulated pollutants would be determined at the internal monitoring point where the wastewater containing those pollutants leaves the hot forming wastewater treatment plant. These ''stage 1'' BAT limits would represent the first step in the BAT continuum for BAT Option B and would be enforceable against the facility as soon as they are placed in the facility's NPDES permit. The purpose of the ''stage 1'' BAT limits would be to ensure that, at a minimum, existing effluent quality is maintained while the facility moves toward achieving the ''stage 2'' BAT limitations that are based on the model BAT technologies for this segment. Allowing a facility to degrade its effluent quality during development and installation of the model BAT technologies would be inconsistent with the statute's direction that BAT limitations achieve reasonable further progress toward the Clean Water Act's national goals. EPA's ''stage 1'' limitations, thus, would be intended to capture continuously improving effluent quality.

Because the ''stage 1'' limitations would reflect a level of technology that the facility is already employing or that was previously determined to be BAT for that facility, EPA would be able to conclude at the time of promulgation that the technology bases for the ''stage 1'' limits are both technically available and economically achievable. If EPA were to promulgate such limitations, EPA would also consider whether they would result in any adverse non-water quality environmental impacts, and would also consider all of the other statutory factors specified in CWA section 304(b)(2)(B) and 306. EPA believes that ''stage 1'' limitations could be the ''best'' available technology economically achievable for facilities in the segment if the record shows that they allow those facilities to focus their resources on the research, development, testing, and installation of the technologies ultimately needed to achieve the ''stage 2'' limitations, which are based on model BAT technology for the subpart. ''Stage 1'' limitations thus would reflect ''reasonable further progress toward the national goal of eliminating the discharge of all pollutants,'' as called for by CWA section 301(b)(2)(A), and could reasonably represent the appropriate first rung of the segment BAT ladder, if EPA were to determine that the model technology is not economically achievable at the time of promulgation.

The second component would consist of interim milestone limitations. Under this component, facilities would be required to meet enforceable requirements determined by the permitting authority based on best professional judgment; these milestones would be expressed as narrative or numeric conditions in the facility's NPDES permit and would reflect each step in a facility's progress toward achievement of the ultimate, ''stage 2,'' performance requirements.

With respect to ''stage 2,'' EPA would promulgate limitations that represent the performance that can be achieved using the model BAT technology for the segment. Because the model technology for BAT Option B's ''stage 2'' limitations would be the same as those proposed for BAT Option A, the calculated limitations would be identical as well. The difference between the BAT Option A and BAT Option B is that the facilities in this segment would not be required to be subject to those limitations upon promulgation. Rather, the facilities would be subject to the ''stage 2'' limitations at some later date specified in the regulation by EPA, *e.g.,* April 30, 2007. That date would represent the date by which EPA determines—based on the administrative record at the time of promulgation—that the model technology would be economically achievable for the segment as a whole. Thus, under BAT Option B , if EPA concludes at the time of promulgation that five years would be sufficient time to allow the subcategory as a whole to raise the capital necessary to implement the model BAT technology for the segment in a way to assure its economic achievability, then EPA would specify that date as the date by which the segment as a whole is subject to the ''stage 2'' BAT limitations.

EPA acknowledges that the uncertainties of the iron and steel market and the financial circumstances of individual firms may make it difficult to project the economic achievability of particular technologies in future years, even in the comparative near-term. EPA expects it would take into account a variety of factors, including the costs of the BAT model technology over a specified number of years, the expected industry price and revenue cycle, the economic impact on the segment of other EPA regulations that might affect them within the time frame, and resulting aggregate costs, closures, and firm failures.

In the effluent limitations guidelines and standards for the pulp, paper and paperboard industry, EPA adopted an approach similar to BAT Option B as part of its Voluntary Advanced Technology Incentives Program. See 40 CFR 430.24(b). Facilities choosing to participate in the Voluntary Advanced Technology Incentives Program could enroll at one of three levels, or tiers, each with its own set of limits and time frames for compliance and each based on a different model BAT technology (with technologies becoming more advanced as the time periods for compliance were extended). each tier, EPA promulgated voluntary advanced technology BAT limitations that consisted of three separate components. Together, the three components comprised BAT for any bleached papergrade kraft and soda mill that elected to participate in the voluntary

incentives program. See 40 CFR 430.24(b). The first component consisted of ''stage 1'' existing effluent quality limitations that were similar in principle to the ''stage 1'' limitations described above for BAT Option B. See 40 CFR 430.24(b)(1). The second component consisted of enforceable interim milestones developed on a best professional judgment basis by the permitting authority to reflect reasonable interim milestones toward achievement of the ultimate BAT limitations. See 40 CFR 430.24(b)(2). (The program also included numeric six-year milestone limitations that would apply to facilities that enrolled in Incentives Tiers with deadlines of 2009 and 2014. See 40 CFR 430.24(b)(3).) The third component consisted of numeric ''stage 2'' effluent limitations that reflected the limitations achievable by the model BAT technology for the particular tier. Taken together, these three components constitute reasonable further progress toward the national goal of eliminating the discharge of all pollutants and for this reason represented BAT.

EPA recognizes that some facilities in this segment are already achieving or are capable of achieving limitations approaching the ultimate ''stage 2'' limitations. In this situation, the ''stage 1'' or interim milestone BAT limitations for these mills would correspond to that level of achievement, as judged by the permitting authority based on monitoring data supplied by the facility. In this way, EPA would ensure that, for the segment as a whole, limitations would be derived from the ''best'' available technology economically achievable, even though that technology might vary on a mill-by-mill basis during the interim period before the ''stage 2'' limitations apply. This incremental approach is authorized by CWA section 301(b)(2)(A), which expressly requires BAT to result in reasonable further progress toward the national goal of eliminating pollutant discharges. EPA believes that the two-step approach set forth in BAT Option B would move facilities toward that national goal. Each facility in the segment would be required immediately to begin to implement a BAT package consisting of successively more stringent permit limits and conditions. Although environmental improvements are realized only incrementally, the facility is subject to BAT limits as soon as its permit is written based on the first increment of that BAT package. Thus, the facility is continuously subject to and must comply immediately with the BAT limits as they progressively unfold, including each interim BAT limitation or permit condition representing that progress.

EPA's promulgation of BAT as a package of progressively more stringent limitations and conditions is also consistent with the use of BAT as a ''beacon to show what is possible.'' *Kennecott* v. *EPA,* 780 F.2d 445, 448 (4th Cir. 1985). By using BAT Option B, EPA thus would be able to promulgate forward-looking effluent limitations guidelines and standards for the segment as a whole. If EPA were to adopt BAT Option B, EPA would be promoting a form of technological progress that is consistent with Congressional intent that BAT should aspire to ''increasingly higher levels of control.'' See, *e.g.,* Statement of Sen. Muskie (Oct. 4, 1972), reprinted in A Legislative History of the Water Pollution Control Act Amendments of 1972 (''1972 Leg. Hist.''), at 170. It would also be consistent with the overall goals of the Act. See CWA section 101(a). Agencies have considerable discretion to interpret their statutes to promote Congressional objectives. '' '[T]he breadth of agency discretion is, if anything, at zenith when the action * * * relates primarily to * * * the fashioning of policies, remedies and sanctions, including enforcement and voluntary compliance programs[,] in order to arrive at maximum effectuation of Congressional objectives.'' ' *U.S. Steelworkers of America* v. *Marshall,* 647 F.2d 1189, 1230–31 n.64 (D.C. Cir. 1980) (upholding OSHA rule staggering lead requirements over 10 years) (quoting *Niagara Mohawk Power Corp.* v. *FPC,* 379 F.2d 153, 159 (D.C. Cir. 1967)), cert. denied, 453 U.S. 9113 (1981). In this case, the codification of progressively more stringent BAT limitations advances not only the general goal of the Clean Water Act, but also the explicit goal of the BAT program. See *Chevron, U.S.A., Inc.* v. *NRDC,* 467 U.S. 837, 843–44 (1984).

Moving toward the elimination of pollutant discharges in stages is also consistent with the overarching structure of the effluent limitations guidelines program. Congress originally envisioned that the sequence of attaining BPT limits in 1977 and BAT limits in 1983 would result in ''levels of control which approach and achieve the elimination of the discharge of pollutants.'' Statement of Sen. Muskie (Oct. 4, 1972), reprinted in 1972 Legislative History, at 170. This two-step approach produced dramatic improvements in water quality, but did not achieve the elimination of pollutant discharges. Therefore, EPA periodically revisits and revises its effluent limitations guidelines with the intention each time of making further progress toward the national goal. This is the third effluent limitations guideline promulgated for the iron and steel industry. Achieving these incremental improvements through successive rulemakings carries a substantial cost, however. The effluent guideline rulemaking process can be highly complex, in large part because of the massive record compiled to inform the Agency's decisions and because of the substantial costs associated with achieving each additional increment of environmental improvement. If EPA were to adopt BAT Option B, EPA would hope to achieve the goals that Congress envisioned for the BAT program at considerably less cost: one rulemaking that looks both at the present and into the future.

Finally, like other agencies, EPA has inherent authority to phase in regulatory requirements in appropriate cases. EPA has employed this authority in other contexts. example, EPA recently phased in, over two years, TSCA rules pertaining to lead-based paint activities. See 40 CFR 746.239 and 61 FR 45788, 45803 (Aug. 29, 1996). Similarly, the Occupational Safety and Health Administration phased in, over 10 years, a series of progressively more stringent lead-related controls. See 29 CFR 1910.1025 (1979 ed.). Indeed, in upholding that rule, the U.S. Court of Appeals for the D.C. Circuit noted that ''the extremely remote deadline at which the [sources] are to meet the final [permissible exposure limits] is perhaps the single most important factor supporting the feasibility of the standard.'' *United Steelworkers of America* v. *Marshall,* 647 F.2d at 1278.

EPA is aware that CWA sections 301(b)(2)(C) & (D) require BAT limits to be achieved ''in no case later than three years after the date such limits are promulgated under section 304(b), and in no case later than March 31, 1989.'' (Section 301(b)(2)(F), which refers to BAT limitations for nonconventional pollutants, also contains the March 31, 1989 date, but uses as its starting point the date the limitations are ''established.'') This language does not speak to the precise question EPA confronts here: whether EPA can promulgate BAT limitations that are phased in over time, so that a direct discharger at all times is subject to and must comply immediately with the particular BAT limitations applicable to them at any given point in time. Section 301(b)(2) provides no clear direction. EPA therefore is charged with making a reasonable interpretation of the statute

to fill the gap. See *Chevron, U.S.A., Inc.* v. *NRDC,* 467 U.S. at 843–44. EPA believes that subjecting facilities to progressively more stringent BAT limitations over time could be the best way of achieving reasonable further progress toward eliminating all pollutant discharges, as intended by Congress. EPA could use BAT Option B to push facilities to achieve environmental reductions beyond those achievable if EPA proposes a BAT based on what is immediately attainable. BAT Option B would also make it possible for facilities to achieve these performance requirements at a pace that makes technical and economic sense. In fact, the Agency estimates the total annualized compliance costs for the alternative to be $13.3 million, which represents a savings of $7.9 million.

EPA specifically solicits comment on both of these options, including options for less expensive technology. Even though the Agency believes that Option A is economically achievable, there may be non-trivial impacts for a few firms. The Agency could not identify less-expensive treatment technology that would meet the objectives of the CWA. Therefore EPA also solicits comment on whether there is any rational basis to distinguish among mills in this segment, so as to apply BAT Option B only to a specific subsegment of mills for which the model technology is not economically achievable at the time of promulgation.

ii. *PSES/PSNS.* EPA estimates that PSES–1, whose technical basis consists of a scale pit with oil skimming, a roughing clarifier, sludge dewatering, filtration, and high rate recycle, with mixed-media filtration of blowdown, would result in a flow reduction of 74% over current conditions, and a 53% reduction in discharge of toxic and non-conventional pollutants. However, EPA does not propose to promulgate PSES for the carbon and allow steel segment of the proposed Integrated and Stand Alone Hot ming subcategory. EPA believes that nationally applicable PSES regulations are unnecessary at this time, because there are only seven facilities in this segment and because PSES–1 would result in an average removal of only 21 toxic pound-equivalents per facility per year for these facilities. These reductions are much lower than other categorical standards promulgated by EPA. example, Organic Chemical, Plastics, and Synthetic Fibers (OCPSF), Electroplating, Battery Manufacturing, and Porcelain Enameling toxic pound equivalents removed per facility per year range from 6,747 to 14,960. In addition, EPA recently decided not to promulgate pretreatment standards for two industrial categories, Industrial Laundries, see 64 FR 45072 (August 18, 1999) and Landfills, see 65 FR 3008 (January 19, 2000), based on low removals of toxic pound equivalents by facilities in those categories. In the case of industrial laundries, EPA decided not to promulgate pretreatment standards based on 32 toxic pound equivalents per facility per year, and in the landfills effluent guidelines, EPA decided not to promulgate pretreatment standards for non-hazardous landfills based on the removal of only 14 toxic pound equivalents per facility per year.

The Agency believes that pretreatment local limits implemented on a case-by-case basis can more appropriately address any individual toxic parameters present at these facilities.

iii. *NSPS.* EPA proposes BAT Option A as the basis for NSPS for this segment because EPA believes it represents the best demonstrated technology for this segment.

iv. *PSNS.* EPA is proposing not to revise PSNS for this segment because EPA does not foresee the construction of any new indirect discharging facilities that would be subject to this segment. EPA also does not believe that it is practicable for a direct discharging facility covered by this segment to become an indirect discharging facility because their flows would be too large for a POTW to handle.

2. *Stainless*

a. *Regulated Pollutants.* i. *BAT* EPA is proposing regulating the following pollutants: chromium and nickel.

ii. *PSES/PSNS.* See discussion under ''Technology Selected—PSES/PSNS'' below.

iii. *NSPS.* EPA is proposing to regulate the same pollutants as for BAT, with the addition of TSS and oil & grease.

b. *Technology Selected.* i. *BAT.* The treatment technologies that serve as the basis for the development of the proposed BAT limits for the stainless segment of the integrated and stand alone hot forming subcategory are: Scale pit with oil skimming, roughing clarifier, with high rate recycle and mixed-media filtration of blowdown. This option is referred to as BAT–1 in Section V.C. EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. EPA did not pursue additional, more stringent options because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for BAT for the stainless steels segment of the proposed Integrated and Stand Alone Hot ming subcategory.

ii. *PSES/PSNS.* EPA estimates that PSES–1 for the stainless segment of the integrated and stand alone hot forming subcategory would result in a reduction of 90% of the flow from current levels, and a 66% removal of toxic and non-conventional pollutants. However, EPA does not propose to promulgate PSES for the stainless steel segment of the proposed Integrated and Stand Alone Hot ming subcategory. EPA believes that nationally applicable PSES regulations are unnecessary at this time, because there are only three facilities in this segment and because PSES–1 would result in an average removal of only 4 toxic pound-equivalents per facility per year for these facilities. These reductions are much lower than other categorical standards promulgated by EPA. example, Organic Chemical, Plastics, and Synthetic Fibers (OCPSF), Electroplating, Battery Manufacturing, and Porcelain Enameling toxic pound equivalents removed per facility per year range from 6,747 to 14,960. And, EPA recently decided not to promulgate pretreatment standards for two industrial categories, Industrial Laundries, see 64 FR 45072 (August 18, 1999) and Landfills, see 65 FR 3008 (January 19, 2000), based on low removals of toxic pound equivalents by facilities in those categories. In the industrial laundries rule, EPA decided not to promulgate pretreatment standards based on 32 toxic pound equivalents per facility per year, and in the landfills effluent guidelines, EPA decided not to promulgate pretreatment standards for non-hazardous landfills based on the removal of only 14 toxic pound equivalents per facility per year.

The Agency believes that pretreatment local limits implemented on a case-by-case basis can more appropriately address any individual toxic parameters present at these facilities.

iii. *NSPS.* EPA's proposed technology is the same as the proposed BAT technology for this segment because no other treatment technologies are demonstrated to control the pollutants EPA proposes to regulate.

F. Non-integrated Steelmaking and Hot ming

After considering all of the technology options described in the Section V.C in light of the factors specified in section 304(b)(2)(B) and 306 of the Clean Water Act, as appropriate, EPA proposes to select the technology options identified below as BAT, PSES, NSPS, and PSNS for the carbon and alloy segment and

the stainless steel segment of the proposed Non-integrated and Stand Alone Hot ming Subcategory.

1. *Carbon and Alloy*

a. *Regulated Pollutants.* i. *BAT.* EPA is proposing regulating the following pollutants: lead and zinc.

ii. *PSES.* See discussion under ''Technology Selected—PSES'' below.

iii. *NSPS/PSNS.* EPA proposes no discharge of process wastewater pollutants to waters of the US for NSPS and PSNS.

b. *Technology Selected.*

i. *BAT.* The treatment technologies that serve as the basis for the development of the proposed BAT limits for the carbon and alloy segment of the proposed Non-integrated and Stand Alone Hot ming Subcategory are: solids removal, cooling tower, high rate recycle, mixed-media filtration of recycled flow or of low volume blowdown flow, and sludge dewatering. This is identified as BAT–1 in Section V.C. EPA estimates that the BAT–1 technology would result in a reduction of 90% of flow and a 72% reduction in the discharge of toxic and non-conventional pollutants. EPA estimates BAT–1 to remove 39,100 toxic pound-equivalents beyond current conditions, at an annualized compliance cost of $3.1 million (1997$). EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. EPA did not pursue additional, more stringent options because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for BAT for the carbon and allow steel segment of the proposed Non-Integrated and Stand Alone Hot ming subcategory.

ii. *PSES.* EPA estimates that the PSES–1 technology would result in a reduction of flow of 7%, and the reduction in the discharge of non-conventional pollutants by 4.3%. However, EPA does not propose to revise PSES for the carbon and alloy steel segment of the proposed Non-Integrated and Stand Alone Hot ming subcategory. EPA believes that nationally applicable PSES regulations are unnecessary at this time, because there are only 15 facilities in this segment and because PSES–1 would result in an average removal of only 3 toxic pound-equivalents per facility per year for these facilities. These reductions are much lower than other categorical standards promulgated by EPA. example, Organic Chemical, Plastics, and Synthetic Fibers (OCPSF), Electroplating, Battery Manufacturing, and Porcelain Enameling toxic pound equivalents removed per facility per year range from 6,747 to 14,960. And, EPA recently decided not to promulgate pretreatment standards for two industrial categories, Industrial Laundries, see 64 FR 45072 (August 18, 1999) and Landfills, see 65 FR 3008 (January 19, 2000), based on low removals of toxic pound equivalents by facilities in those categories. In the industrial laundries rule, EPA decided not to promulgate pretreatment standards based on 32 toxic pound equivalents per facility per year, and in the landfills effluent guidelines, EPA decided not to promulgate pretreatment standards for non-hazardous landfills based on the removal of only 14 toxic pound equivalents per facility per year.

While EPA does not propose to revise PSES for this segment, EPA intends to re-codify the current PSES to fit the new proposed subcategorization format.

iii. *NSPS/PSNS.* EPA proposes no discharge of process wastewater pollutants to waters of the US for NSPS and PSNS. The model NSPS process water and water pollution control technologies include treatment and high-rate recycle systems, management of process area storm water, and disposal of low-volume blowdown streams by evaporation through controlled application on electric furnace slag, direct cooling of electrodes in electric furnaces, and other evaporative uses. Operators of 24 existing non-integrated steel facilities have reported zero discharge of process wastewater. These facilities are located in the following states: Alabama, Arizona, Georgia, Illinois, Indiana, Louisiana, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah, and Washington. In the Non-Integrated Steelmaking and Hot ming subcategory, the 24 facilities produce the following products: Bars, beams, billets, flats, plate, rail, rebar, rod, sheet, slabs, small structurals, strip, and specialty sections. Consequently, the Agency has determined that zero discharge is an appropriate NSPS for non-integrated steelmaking and hot forming operations located in any area of the United States and producing any product. EPA judged that there is no barrier to entry for new sources to achieve this option.

2. Stainless

a. *Regulated Pollutants.* i. *BAT.* EPA is proposing regulating the following pollutants: chromium and nickel.

ii. *PSES.* EPA is proposing regulating the following pollutants: chromium and nickel. Using the methodology described in Section IX.A.2, EPA has determined that both pollutants pass through.

iii. *NSPS/PSNS.* EPA proposes no discharge of process wastewater pollutants to waters of the US for NSPS/PSNS.

b. *Technology Selected.* i. *BAT.*

The treatment technologies that serve as the basis for the development of the proposed BAT limits for the Stainless segment are: solids removal, cooling tower, high rate recycle, mixed-media filtration of recycled flow or of low volume blowdown flow, and sludge dewatering. This is identified as BAT–1 in Section V.C. Under BAT–1, water usage would be reduced by 50% over current levels, and total loadings of non-conventionals would be reduced by 29%. EPA estimates BAT–1 to remove 1,560 toxic pound-equivalents beyond current conditions, at an annualized compliance cost of $0.1 million (1997$). EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. EPA did not pursue additional, more stringent options because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for BAT for the stainless steel segment of the Non-Integrated Steelmaking and Hot ming subcategory.

ii. *PSES.* The treatment technologies that serve as the basis for the development of the proposed PSES limits for the Stainless segment are the same as for BAT–1. This option provides controls for each pollutant that EPA has determined passes through for this segment. EPA estimates that the PSES–1 technology would result in a reduction of flow of 85%, and the reduction in the discharge of non-conventional pollutants by 20%. EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. As was the case for BAT, EPA did not pursue additional, more stringent options for PSES because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by this or any other add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for PSES for this segment.

iii. *NSPS/PSNS.* EPA proposes no discharge of process wastewater pollutants to waters of the US for NSPS and PSNS. See discussion under NSPS/PSNS for the Carbon and Alloy segment of this subcategory, above.

G. Finishing

After considering all of the technology options described in the Section V.C in light of the factors specified in section 304(b)(2)(B) and 306 of the Clean Water Act, as appropriate, EPA proposes to select the technology options identified below as BAT, PSES, NSPS, and PSNS for the carbon and allow segment and the stainless steel segment of the proposed Finishing Subcategory.

1. Carbon and Alloy

a. *Regulated Pollutants.* i. *BAT.* EPA is proposing regulating the following pollutants: hexavalent chromium, chromium, lead, and zinc.

ii. *PSES.* See discussion under ''Technology selected—PSES'' below.

iii. *NSPS.* EPA is proposing regulating the same pollutants as for BAT, with the addition of TSS and oil & grease.

iv. *PSNS.* EPA is proposing regulating the same pollutants as for BAT. Using the methodology described in Section IX.A.2, EPA has determined that hexavalent chromium, chromium, lead, and zinc pass through.

b. *Technology Selected.* i. *BAT.* The treatment technologies that serve as the basis for the development of the proposed BAT limits for the Carbon and Alloy segment for the proposed steel finishing subcategory are: recycle of fume scrubber water, diversion tank, oil removal, hexavalent chrome reduction (where applicable), equalization, metals precipitation, sedimentation, sludge dewatering, and counter-current rinses. This is identified as BAT–1 in Section V.C. EPA estimates that selection of the BAT–1 option as the technology basis would result in the reduction of flow by this segment of the non-integrated steelmaking and hot forming subcategory by 65%, and the reduction in the discharge of non-conventional pollutants by 25%. EPA estimates BAT–1 to remove 22,410 toxic pound-equivalents beyond current conditions, at an annualized compliance cost of $4.0 million (1997$). EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. EPA did not pursue additional, more stringent options because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any other add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for BAT for the carbon and alloy segment of the proposed Steel Finishing subcategory.

ii. *PSES.* The treatment technologies that serve as the basis for PSES–1 are the same as the BAT–1 technologies. EPA estimates that, under PSES–1, flow from this segment of the Finishing subcategory would decrease by 30%, and the amount of toxic and non-conventional pollutants discharged would decrease by 10%. However, EPA does not propose to revise PSES for the carbon and allow steel segment of the proposed Steel Finishing subcategory. EPA believes that nationally applicable PSES regulations are unnecessary at this time, because PSES–1 would result in an average removal of only 12 toxic pound-equivalents per facility per year for these facilities. These reductions are much lower than other categorical standards promulgated by EPA. example, Organic Chemical, Plastics, and Synthetic Fibers (OCPSF), Electroplating, Battery Manufacturing, and Porcelain Enameling toxic pound equivalents removed per facility per year range from 6,747 to 14,960. And, EPA recently decided not to promulgate pretreatment standards for two industrial categories, Industrial Laundries, see 64 FR 45072 (August 18, 1999) and Landfills, see 65 FR 3008 (January 19, 2000), based on low removals of toxic pound equivalents by facilities in those categories. In the industrial laundries rule, EPA decided not to promulgate pretreatment standards based on 32 toxic pound equivalents per facility per year, and in the landfills effluent guidelines, EPA decided not to promulgate pretreatment standards for non-hazardous landfills based on the removal of only 14 toxic pound equivalents per facility per year.

While EPA does not propose to revise PSES for this segment, EPA intends to re-codify the current PSES to fit the new proposed subcategorization format.

iii. *NSPS/PSNS.* EPA proposes NSPS and PSNS for this subcategory to be the same as the proposed BAT technology because no other treatment technologies are demonstrated to control the pollutants EPA proposes to regulate.

2. Stainless

a. *Regulated Pollutants.* i. *BAT.* EPA is proposing regulating the following pollutants: hexavalent chromium, chromium, nickel, ammonia-N, and fluoride.

EPA is aware of a potential problem associated with nitrate discharge from one stainless steel finishing operation with combination (hydrofluoric and nitric) acid pickling. It may be that similar problems are associated with discharges coming from similar operations in other parts of the country. Nitrates, when consumed in drinking water, can be associated with health problems in humans, particularly infants.

Nitrates were identified as a pollutant of concern for stainless steel acid pickling operations where nitric acids and combinations of nitric and hydrofluoric acids are used for surface treatments for various grades of stainless steels. Nitrates originate from the nitric acids used in the process and are released from three sources: waste or spent pickling acids, pickle rinse waters and acid pickling fume scrubbers. Some stainless steel finishing operations dispose of their nitrate bearing wastewater via off-site hauling. Many other stainless steel finishing facilities treat spent nitric acid and nitric/hydrofluoric acid pickle liquors on site with the pickling rinse waters and fume scrubber waters from other stainless steel finishing operations. Nitrates are soluble in water and thus are not removed to any appreciable degree in the metals precipitation systems used to treat chromium and nickel in stainless steel finishing wastewaters.

EPA collected information from mills with stainless steel finishing operations with onsite chemical precipitation treatment of spent nitric and nitric/hydrofluoric acids in combination with pickle rinse waters and acid pickling fume scrubber blow-down. The treated effluent nitrate concentrations from the mills without acid purification units ranged from about 500 to more than 1,000 mg/l.

Acid purification systems are used on several stainless steel acid pickling lines for recovery and reuse of nitric and nitric/hydrofluoric acids. This technology comprises removal of dissolved metals (iron, chromium, nickel) from a side stream of the strong acid pickling solution and return of the purified acid to the acid pickling bath. This essentially extends the life of the pickling acids, thereby reducing the consumption of virgin nitric acid. A reject stream containing dilute acid and the dissolved metals is periodically sent to wastewater treatment.

The model BAT technology for stainless steel finishing operations includes acid purification units for recovery and reuse of spent nitric and nitric/hydrofluoric acid pickling solutions. EPA believes facilities using acid purification technology can achieve long-term average concentrations of nitrates in the treated stainless steel acid pickling wastewater effluent in the range of 200 mg/l to 300 mg/l.

EPA is considering developing a limit for nitrate (in the form of nitrate-nitrite-N) for stainless steel finishing operations with combination acid pickling. EPA solicits comment and information on this issue, particularly (a) monitoring data from steel finishing

operations that discharge nitrates, or POTWs that receive wastewater from these operations, and (b) performance data and cost estimates from vendors of pollution control equipment that is capable of achieving substantial reduction of nitrates from steel pickling wastewaters.

ii. *PSES.* See discussion under ''Technology Selected—PSES'' below.

iii. *NSPS/PSNS.* EPA is proposing regulating the same pollutants as for BAT, with the addition of TSS and oil & grease.

iv. *PSNS.* EPA is proposing regulating the same pollutants as for BAT. Using the methodology described in Section IX.A.2, EPA has determined that hexavalent chromium, chromium, nickel, ammonia-N, and fluoride pass through.

b. *Technology Selected.* i. *BAT.* The treatment technologies that serve as the basis for the development of the proposed BAT for the Stainless segment of the proposed steel finishing subcategory are Recycle of fume scrubber water, diversion tank, oil removal, hexavalent chrome reduction (where applicable), equalization, metals precipitation, sedimentation, sludge dewatering, counter-current rinses, and acid purification. This is identified as BAT–1 in Section V.C. EPA estimates that, under BAT–1, flow from this segment of the Finishing subcategory would decrease by 47%, and the amount of toxic and non-conventional pollutants discharged would decrease by 45%. EPA estimates BAT–1 to remove 69,700 toxic pound-equivalents beyond current conditions, at an annualized compliance cost of $0.2 million (1997$). EPA estimates that no facilities would close as a result of BAT–1. EPA has determined that this option is economically achievable. EPA did not pursue additional, more stringent options because all significant POCs in the effluent after application of BAT–1 system are projected to exist at levels too low to be further treated by any other add-on technology. Therefore, EPA proposes BAT–1 as the technology basis for BAT for the stainless steel segment of the proposed Steel Finishing subcategory.

ii. *PSES.* The treatment technologies that serve as the basis for PSES–1 are the same as the BAT–1 technologies. EPA estimates that, under PSES–1, flow from the stainless segment of the Steel Finishing subcategory would decrease by 23%, and the amount of toxic and non-conventional pollutants discharged would decrease by 10%. However, EPA is not proposing to revise PSES for facilities in this segment.

EPA discovered that the majority (548 of 653) of the toxic pound-equivalents projected to be removed through promulgation of PSES standards were attributable to one parameter (fluoride) from one facility. EPA believes that, in a situation like this, it is more appropriate for the POTW control authority for that facility to control the pollutant release through its pretreatment control mechanism, rather than to implement a national pretreatment standard. When these toxic pound-equivalents are removed from the analysis, the number of toxic pound-equivalents per facility drops to 7. EPA recently decided not to promulgate pretreatment standards for two industrial categories, Industrial Laundries, see 64 FR 45072 (August 18, 1999) and Landfills, see 65 FR 3008 (January 19, 2000), with projected removals of toxic pound equivalents by facilities in those categories comparable to this. In the industrial laundries rule, EPA decided not to promulgate pretreatment standards based on 32 toxic pound equivalents per facility per year; and in the landfills effluent guidelines, EPA decided not to promulgate pretreatment standards for non-hazardous landfills based on the removal of only 14 toxic pound equivalents per facility per year.

While EPA does not propose to revise PSES for this segment, EPA intends to re-codify the current PSES to fit the new proposed subcategorization format. The PSES limits currently in 40 CFR part 420 for each manufacturing process except electroplating would continue to apply under this proposal. Limits for the electroplating manufacturing process are currently included in 40 CFR part 433. The PSES limits in 40 CFR part 433 are concentration-based, as opposed to those in 40 CFR part 420, which are mass-based. To ensure a consistent basis for facilities operating other operations in addition to electroplating, EPA is proposing to convert the existing 40 CFR part 433 PSES concentration-based limits to mass-based limits by multiplying by the proposed BAT production-normalized flow rate and the appropriate conversion factor. Nine pollutants are regulated under PSES at 40 CFR part 433, some of which do not apply to electroplating operations as performed in the Iron and Steel industry. EPA proposes to specify PSES limits for four of the pollutants: Chromium, lead, nickel, and zinc. These four metals were identified as POCs for electroplating manufacturing operations in section 7 of the technical development document. EPA does not believe this action will result in incremental cost increases to the industry. EPA seeks industry comment on this matter.

iii. *NSPS/PSNS.* EPA proposes NSPS and PSNS for this subcategory to be the same as the proposed BAT technology because no other treatment technologies are demonstrated to control the pollutants EPA proposes to regulate.

H. Other

After considering all of the technology options described in the Section V.C in light of the factors specified in section 304(b)(1)(B) and 306 of the Clean Water Act, as appropriate, EPA proposes to select the technology options identified below as BPT, PSES, NSPS, and PSNS for the following proposed segments in this final subcategory: Direct-Reduced Ironmaking, ging, and Briquetting.

1. Direct-reduced Ironmaking (DRI)

a. *Regulated Pollutants.* The Agency proposes to regulate TSS for this segment.

b. *Technology Selected.* i. *BPT/BCT/NSPS.* EPA is proposing BPT and BCT for the Direct-reduced Ironmaking (DRI) segment because the Agency is setting limits for the first time for the conventional pollutants in this subcategory. The treatment technologies that serve as the basis for the development of the proposed BPT/BCT/NSPS limits for the DRI segment are: solids removal, clarifier, and high rate recycle, with filtration for blowdown wastewater. This is identified as BPT–1 in Section V.C. EPA estimates that no facilities would close as a result of BPT–1.EPA proposes this option because it is the best practicable control technology currently available. It is also the best demonstrated technology for controlling the discharge of conventional pollutants from these operations. EPA is not proposing BAT limitations for this segment because it has identified no toxic or non-conventional pollutants of concern for the segment.

ii. *PSES/PSNS.* The Agency reserves PSES/PSNS for the DRI segment it found no pollutants that pass through.

2. ging

a. *Regulated Pollutants and Limits.* i. *Direct Dischargers (BPT/BCT/NSPS).* The Agency proposes to regulate TSS and oil & grease for this segment.

ii. *Indirect Dischargers (PSES/PSNS).* The Agency reserves PSES/PSNS for the forging segment because it found no pollutants that pass through.

b. *Technology Selected.* i. *BPT/BCT/NSPS.* forging operations, EPA is proposing BPT/BCT because the Agency is setting limits for the first time for the conventional pollutants in this

subcategory. The treatment technology that serves as the basis for the development of the proposed BPT and BCT limitations and NSPS for the ging segment is oil/water separation. This is identified as BPT–1 in Section V.C. EPA estimates that there will be a reduction of O&G of 72% from direct discharging forging operations as a result of implementation of this BPT/BCT option.

EPA estimates that no facilities would close as a result of BPT–1. EPA proposes this option because it is the best practicable control technology currently available. It is also the best demonstrated technology for controlling the discharge of conventional pollutants from these operations.

EPA is not proposing BAT limitations for this segment because it has identified no toxic or non-conventional pollutants of concern for the segment. EPA is not proposing pretreatment standards for this segment because it found no pollutants that pass through.

3. Briquetting

a. *Technology Selected.* The proposed BPT/BCT/NSPS/PSES/PSNS limits for the Briquetting segment are: no discharge of process wastewater pollutants to waters of the U.S.

X. Regulatory Implementation

A. Implementation of Part 420 Through the NPDES Permit Program and the National Pretreatment Program

Under sections 301, 304, 306 and 307 of the CWA, EPA promulgates national effluent limitations guidelines and standards of performance for major industrial categories for three classes of pollutants: (1) Conventional pollutants (*i.e.,* total suspended solids, oil and grease, biochemical oxygen demand, fecal coliform, and pH); (2) toxic pollutants (*e.g.*, toxic metals such as chromium, lead, nickel, and zinc; toxic organic pollutants such as benzene, benzo-a-pyrene, and naphthalene); and (3) non-conventional pollutants (*e.g.*, ammonia-N, fluoride, iron, total phenols, and 2,3,7,8-tetrachlorodibenzofuran).

As discussed in Section II, EPA must promulgate six types of effluent limitations guidelines and standards for each major industrial category, as appropriate:

Abbreviation	Effluent limitation guideline or standard
BPT	Best Practicable Control Technology Currently Available.
BAT	Best Available Technology Economically Achievable.
BCT	Best Control Technology for Conventional Pollutants.
NSPS	New Source Performance Standards.
PSES	Pretreatment Standards for Existing Sources.
PSNS	Pretreatment Standards for New Sources.

The pretreatment standards apply to industrial facilities with wastewater discharges to POTWs, which generally are municipal wastewater treatment plants. The effluent limitations guidelines and new source performance standards apply to industrial facilities with direct discharges to navigable waters.

1. NPDES Permit Program

Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit program is designed to limit the discharge of pollutants into navigable waters of the United States through a combination of various requirements including technology-based and water quality-based effluent limitations. This proposed regulation contains the categorical technology-based effluent limitations guidelines and standards applicable to the iron and steel industry to be used by permit writers to derive NPDES permit technology-based effluent limitations. Water quality-based effluent limitations (WQBELs) are based on receiving water characteristics and ambient water quality standards, including designated water uses. They are derived independently from the technology-based effluent limitations set out in this proposed regulation. The CWA requires that NPDES permits must contain for a given discharge, the more stringent of the applicable technology-based and water quality-based effluent limitations.

Section 402(a)(1) of the CWA provides that in the absence of promulgated effluent limitations guidelines or standards, the Administrator, or her designee, may establish effluent limitations for specific dischargers on a case-by-case basis. Federal NPDES permit regulations provide that these limits may be established using ''best professional judgment'' (BPJ) taking into account any proposed effluent limitations guidelines and standards and other relevant scientific, technical and economic information. Where EPA has promulgated technology-based effluent limitations guidelines and standards for particular pollutants, any more stringent effluent limitations must be either WQBELs or effluent limitations derived under other regulations established by the permit authority.

Section 301 of the CWA, as amended by the Water Quality Act of 1987, requires that BAT effluent limitations for toxic pollutants are to have been achieved as expeditiously as possible, but not later than three years from date of promulgation of such limitations and in no case later than March 31, 1989. See 301(b)(2). Because the proposed revisions to 40 CFR part 420 will be promulgated after March 31, 1989, NPDES permit effluent limitations based on the revised effluent limitations guidelines must be included in the next NPDES permit issued after promulgation of the regulation and the permit must require immediate compliance.

2. New Source Performance Standards

purposes of applying the new source performance standards (NSPS) being proposed today, a source is a new source if it commences construction after the effective date of the forthcoming final rule. (EPA expects to take final action on this proposal in April 2002, which is more than 120 days after the date of proposal.) See 40 CFR 122.2. Each source that meets this definition would be required to achieve any applicable newly promulgated NSPS upon commencing discharge.

However, the currently codified NSPS continue to have force and effect for a limited universe of new sources; for this reason, in today's proposed rule, EPA is retaining the NSPS promulgated in 1982 for part 420. Specifically, following promulgation of any revised NSPS, the 1982 NSPS would continue to apply for a limited period of time to new sources that commenced discharge within the time period beginning ten years before the effective date of a final rule revising part 420. Thus, if EPA promulgates revised NSPS for Part 420 in April 2002, and those regulations take effect in June 2002, any direct discharging new source that commenced discharge after June 1992 but before June 2002 would be subject to the currently codified NSPS for ten years from the date it commenced discharge or during the period of depreciation or amortization of such facility, whichever comes first. See CWA section 306(d). After that ten year period expires, any new or revised BAT limitations would apply with respect to toxics and nonconventional pollutants. Limitations on conventional pollutants would be based on the1982 NSPS for conventional pollutants unless EPA promulgates revisions to BPT/BCT for conventional pollutants that are more stringent than the 1982 NSPS.

Rather than reproduce the 1982 NSPS in the proposed rule (which is substantially reorganized from the 1982 structure), EPA proposes to refer permitting authorities to the NSPS codified in the 2000 edition of the Code of Federal Regulations for use during the applicable ten-year period. (The 2000 edition of the Code of Federal Regulations presents the 1982 NSPS tables.) This approach would allow EPA to avoid reproducing in the new regulations numerous tables of NSPS that would soon become outdated.

National Pretreatment Standards

40 CFR Part 403 sets out national pretreatment standards which have three principal objectives: (1) To prevent the introduction of pollutants into publicly owned treatment works (POTWs) that will interfere with POTW operations, including use or disposal of municipal sludge; (2) to prevent the introduction of pollutants into POTWs which will pass through the treatment works or will otherwise be incompatible with the treatment works; and (3) to improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.

The national pretreatment standards comprise a series of prohibited discharges designed to prevent interference with POTW operations and federal categorical pretreatment standards designed to prevent pass through of pollutants introduced to POTWs by industrial sources. Local control authorities are required to implement the national pretreatment program including application of the federal categorical pretreatment standards to their industrial users that are subject to such categorical pretreatment standards, as well as any pretreatment standards derived locally (*i.e.,* local limits) that are more restrictive than the federal categorical standards. This proposed regulation sets out revisions to the federal categorical pretreatment standards (PSES and PSNS) applicable to iron and steel facilities regulated by 40 CFR part 420.

The federal categorical pretreatment standards for existing sources must be achieved not later than three years after promulgation of the standards. During that three year period, existing indirect discharges are subject to the 1982 PSES. The 1982 PSES would no longer apply after the expiration of that three-year period. Rather than reproduce the 1982 PSES in the proposed rule (which is substantially reorganized from the 1982 structure), EPA proposes to refer pretreatment control authorities to the PSES codified in the 2000 edition of the Code of Federal Regulations for use during that three-year period. (The 2000 edition of the Code of Federal Regulations presents the 1982 PSES tables.) This approach would allow EPA to avoid reproducing in the new regulations numerous tables of pretreatment standards that would become outdated within three years.

the purposes of this rule, EPA proposes to treat new indirect dischargers in the same way that it treats new direct dischargers, in several material respects.

First, as discussed elsewhere in this preamble, EPA proposes PSNS technologies to be identical to NSPS technologies except where different technologies are justified by EPA's pass through analysis.

Second, for indirect dischargers that are subject to the current PSNS, EPA proposes to maintain the current PSNS for ten years beginning on the date the new indirect discharger commenced discharge or during the period of depreciation or amortization of the facility, whichever comes first. Thereafter, the indirect discharger would be subject to any newly promulgated PSES. EPA sees no principled basis to distinguish between new direct and indirect dischargers when deciding whether to apply more stringent standards within the first ten years of operation. Like new direct dischargers, new indirect dischargers were designed and constructed to meet existing performance standards for new sources. Concluding that it would be unfair to require a new source to meet a new set of limits within the first ten years of operation, Congress passed CWA section 306(d). EPA believes the same concerns apply to new indirect dischargers; therefore, in the interests of equity, EPA proposes to apply the ten-year shield to new indirect dischargers as well.

Third, EPA proposes to characterize a source as a new source subject to the new PSNS if it commences construction after the effective date of the forthcoming final rule. Each source that meets this definition would be required to achieve any applicable newly promulgated PSNS upon commencing discharge. EPA believes this definition is appropriate in the context of part 420 because PSNS already exists to regulate any indirect discharges that might commence construction prior to promulgation of revisions to part 420. Therefore, this is not a situation where new discharges might go unregulated during the period between proposed and final action. This definition is also consistent with the most recent interpretation of CWA section 306, upon which EPA relies by analogy. In 1983, the U.S. Court of Appeal for the Third Circuit struck down the definition of new source in EPA's pretreatment regulations based on its interpretation of section 306, which applies to direct discharging new sources. See *National Assoc. of Metal Finishers, et al.* v. *EPA,* 719 F.2d 624 (3d Cir. 1983). In 1987, the U.S. Court of Appeals for the District of Columbia disagreed with the Third Circuit's interpretation of section 306 and upheld a definition of new source that was tied to the date of promulgation rather than the date of proposal. See *NRDC* v. *EPA,* 822 F.2d 104 (D.C. Cir. 1987). The court reasoned that a period of uncertainty beyond 120 days (from proposal to promulgation) was unreasonable, and that Congress could not have intended potential new sources ''to languish in doubt as to when non-final regulations would eventually enjoy the force of law.'' This reasoning is relevant to this rulemaking, where EPA is scheduled to take final action on today's proposal in 18 months. Finally, EPA's approach in this proposed rule is also distinguishable from the facts contemplated by the Third Circuit, which did not consider the retrofitting costs a new source might incur when planning and constructing its facility in accordance with the current PSNS, only to have to make potentially costly adjustments soon thereafter to comply with newly promulgated PSNS.

Rather than reproduce the 1982 PSNS in the proposed rule (which is substantially reorganized from the 1982 structure), EPA proposes to refer pretreatment control authorities to the PSNS codified in the 2000 edition of the Code of Federal Regulations for use during the applicable ten-year period. (The 2000 edition of the Code of Federal Regulations presents the 1982 PSNS tables.) This approach would allow EPA to avoid reproducing in the new regulations numerous tables of PSNS that have already been codified.

B. Upset and Bypass Provisions

A ''bypass'' is an intentional diversion of waste streams from any portion of a treatment facility. An ''upset'' is an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. EPA's regulations concerning bypasses and upsets for direct dischargers are set forth at 40 CFR 122.41(m) and (n) and for indirect dischargers at 40 CFR 403.16 and 403.17.

C. Variances and Removal Credits

1. Variances

The NPDES permit regulations provide for the following types of modifications of permit effluent limitations derived from the effluent limitations guidelines:

a. Section 301(c) economic variance from BAT for non-conventional pollutants.

b. Section 301(g) water quality-related variance from BAT for non-conventional pollutants.

c. Section 316(a) thermal variance from BPT, BCT and BAT.

d. Fundamentally different factors variance (40 CFR part 125, subpart D).

Although final regulations that set out criteria for applying for and evaluating applications for section 301(c) and 301(g) variances have not been promulgated, EPA has published guidance materials for permit authorities regarding such variances. Variances under section 316(a) for thermal discharges are not at issue in the current 40 CFR part 420, or with these proposed modifications, because effluent limitations guidelines for thermal discharges have not been promulgated previously, nor is EPA proposing them at this time. See the published guidance materials and 40 CFR part 125 for further information regarding the above-listed variances. The pretreatment regulations incorporate a similar requirement at 40 CFR 403.13(h)(9).

2. Removal Credits

Section 307(b)(1) of the CWA establishes a discretionary program for POTWs to grant ''removal credits'' to their indirect dischargers. Removal credits are a regulatory mechanism by which industrial users may discharge a pollutant in quantities that exceed what would otherwise be allowed under an applicable categorical pretreatment standard because it has been determined that the POTW to which the industrial user discharges consistently treats the pollutant. EPA has promulgated removal credit regulations as part of its pretreatment regulations. See 40 CFR 403.7. These regulations provide that a POTW may give removal credits if prescribed requirements are met. The POTW must apply to and receive authorization from the Approval Authority. To obtain authorization, the POTW must demonstrate consistent removal of the pollutant for which approval authority is sought. Further, the POTW must have an approved pretreatment program. Finally, the POTW must demonstrate that granting removal credits will not cause the POTW to violate applicable Federal, State and local sewage sludge requirements. 40 CFR 403.7(a)(3).

The United States Court of Appeals for the Third Circuit interpreted the Clean Water Act as requiring EPA to promulgate the comprehensive sewage sludge regulations required by CWA § 405(d)(2)(A)(ii) before any removal credits could be authorized. See *NRDC* v. *EPA,* 790 F.2d 289, 292 (3rd Cir., 1986); cert. denied. 479 U.S. 1084 (1987). Congress made this explicit in the Water Quality Act of 1987, which provided that EPA could not authorize any removal credits until it issued the sewage sludge use and disposal regulations. On February 19, 1993, EPA promulgated Standards for the Use or Disposal of Sewage Sludge, which are codified at 40 CFR part 503 (58 FR 9248). EPA interprets the Court's decision in *NRDC* v. *EPA* as only allowing removal credits for a pollutant if EPA has either regulated the pollutant in part 503 or established a concentration of the pollutant in sewage sludge below which public health and the environment are protected when sewage sludge is used or disposed.

The part 503 sewage sludge regulations allow four options for sewage sludge disposal: (1) Land application for beneficial use, (2) placement on a surface disposal unit, (3) firing in a sewage sludge incinerator, and (4) disposal in a landfill which complies with the municipal solid waste landfill criteria in 40 CFR part 258. Because pollutants in sewage sludge are regulated differently depending upon the use or disposal method selected, under EPA's pretreatment regulations the availability of a removal credit for a particular pollutant is linked to the POTW's method of using or disposing of its sewage sludge. The regulations provide that removal credits may be potentially available for the following pollutants:

(1) If POTW applies its sewage sludge to the land for beneficial uses, disposes of it in a surface disposal unit, or incinerates it in a sewage sludge incinerator, removal credits may be available for the pollutants for which EPA has established limits in 40 CFR part 503. EPA has set ceiling limitations for nine metals in sludge that is land applied, three metals in sludge that is placed on a surface disposal unit, and seven metals and 57 organic pollutants in sludge that is incinerated in a sewage sludge incinerator. (40 CFR 403.7(a)(3)(iv)(A)).

(2) Additional removal credits may be available for sewage sludge that is land-applied, placed in a surface disposal unit, or incinerated in a sewage sludge incinerator, so long as the concentration of these pollutants in sludge do not exceed concentration levels established in part 403, Appendix G, Table II. sewage sludge that is land applied, removal credits may be available for an additional two metals and 14 organic pollutants. sewage sludge that is placed on a surface disposal unit, removal credits may be available for an additional seven metals and 13 organic pollutants. sewage sludge that is incinerated in a sewage sludge incinerator, removal credits may be available for three other metals (40 CFR 403.7(a)(3)(iv)(B)).

(3) When a POTW disposes of its sewage sludge in a municipal solid waste landfill that meets the criteria of 40 CFR part 258, removal credits may be available for any pollutant in the POTW's sewage sludge (40 CFR 403.7(a)(3)(iv)(C)).

Several iron and steel companies which are indirect dischargers to POTWs have sought removal credits for pollutants subject to categorical pretreatment standards but for which no sewage sludge standard (part 503, part 403, Appendix G-Table I) or maximum concentration (part 403, Appendix G—Table II) has been established. Specifically, these companies claim that phenols (4AAP) are consistently treated by POTWs and do not cause the sewage sludge to adversely affect human health and the environment. (See, *e.g., LTV Steel* v. *EPA,* No. 94–1516 (7th Cir.)). Today's proposal, if finalized, would mean that removal credits for phenols (4AAP) would no longer be necessary, because there would no longer be a categorical pretreatment standard for that pollutant. However, for those pollutants which would be included in the categorical pretreatment standard, only those included in either part 403, Appendix G—Table I or Table II would be eligible for removal credits.

D. Production Basis for Calculation of Permit Limitations

1. Background

The effluent limitations guidelines and standards for BPT, BAT, NSPS, PSES, and PSNS proposed today are expressed as mass limitations in pounds/ton of product. The mass limitation is derived by multiplying an effluent concentration (determined from the analysis of treatment system performance) by a model flow appropriate for each subcategory expressed in gallons/ton of product, or gallons/day. The production normalized flows used to develop many of the limits in the proposed rule are considerably lower than those used to

develop currently applicable limits. Consequently, many of the proposed limitations are more stringent than the current limitations for the same operations, even though other components of the wastewater treatment system remains the same. The proposed limitations neither require the installation of any specific control technology nor the attainment of any specific flow rate or effluent concentration. A facility subject to today's proposed regulation can use various treatment alternatives or water conservation practices to achieve a particular effluent limitation or standard. The model treatment systems described here illustrate at least one means available to achieve the proposed effluent limitations guidelines and standards.

The NPDES permit regulations at § 122.45(f) require that NPDES permit effluent limitations be specified as mass effluent limitations (*e.g.,* lbs/day or kg/day), except under certain enumerated circumstances that do not apply here. In order to convert the proposed effluent limitations expressed as pounds/ton to a monthly average or daily maximum permit limit, the permitting authority would use a production rate with units of tons/day. The current part 420 and part 122.45(b)(2) NPDES permit regulations require that NPDES permit and pretreatment limits be based on a ''reasonable measure of actual production.'' The production rates used for NPDES permitting for the iron and steel industry have commonly been the highest annual average production from the prior five year period prorated to a daily basis, or the highest monthly production over the prior five years prorated to a daily basis. Industry stakeholders have indicated that (1) EPA should put the method used to determine appropriate production rates for calculating allowable mass loadings into the regulation for consistency, so that the permit writers can all use the same basis; and (2) EPA should use a high production basis, such as maximum monthly production over the previous five year period or maximum design production, in order to ensure that a facility will not be out of compliance during periods of high production.

The NPDES permit regulations at 40 CFR 122.45(b)(2)(i) require that for existing sources mass effluent limitations calculated from production-based effluent limitations guidelines and standards must be based not on production capacity, but on a ''reasonable measure of actual production.'' The current iron and steel regulation at 40 CFR 420.04 sets out the basis for calculating mass-based pretreatment requirements and requires that the pretreatment requirements also be based on a reasonable measure of actual production. That regulation provides the following examples of what may constitute a reasonable measure of actual production: the monthly average for the highest of the previous five years, or the high month of the previous year. Both values are converted to a daily basis (*i.e.,* tons/day) for purposes of calculating monthly average and daily maximum mass permit effluent limitations. Similar provisions exist in the national pretreatment regulations at 40 CFR 403.6(c)(3) for deriving mass-based pretreatment requirements.

Each of the above regulations requires that effluent limitations and pretreatment standards for new sources must be based on projected production. That approach is carried forward in this proposed regulation.

EPA believes that some NPDES and pretreatment permit production rates have been derived in a manner that is not consistent with the term ''reasonable measure of actual production'' specified at § 122.45(b)(2)(i), 403.6(c)(3), and 420.04. In some cases, maximum production rates for similar process units discharging to one treatment system were determined from different years or months, which may provide an unrealistically high measure of actual production. In EPA's view, this would occur if the different process units could not reasonably produce at these high rates simultaneously.

The ideal situation for the application of production-based effluent limitations and standards is where production is relatively constant from day-to-day or month-to-month. In this case, the production rate used for purposes of calculating the permit limitations would then be the average rate. However, in the case of the iron and steel industry, production rates are not constant and vary significantly based on factors such as fluctuations in marked demand for domestic products, maintenance, product changes, equipment failures, and facility modifications. As such, the typical production rate for individual mills vary significantly over time, especially over the customary five-year life of a permit.

The objective in determining a production estimate for a mill is to develop a reasonable measure of production which can reasonably be expected to prevail during the next term of the permit. This is used in combination with the production-based limitations to establish a maximum mass of pollutant that may be discharged each day and month. However, if the permit production rate is based on the maximum month, then the permit could allow excessive discharges of pollutants during significant portions of the life of the permit. These excessive allowances may discourage mills from ensuring optimal waste management, water conservation, and wastewater treatment practices during lower production periods. On the other hand, if the average permit production rate is based on an average derived from the highest year of production over the past five years, then mills may have trouble ensuring that their waste management, water conservation, and wastewater treatment practices can accommodate shorter periods of higher production. This might require mills to target a more stringent treatment level than that on which the limits were based during these periods of high production. To accomplish this mills would likely have to develop more efficient treatment systems, greater hydraulic surge capacity, and better water conservation and waste management practices during these periods.

2. Alternatives for Establishing Permit Effluent Limitations

EPA is soliciting comment on several alternative approaches that may result in more stringent mass-based permits for some mills with better protection of the environment for the entire life of a permit and may result in higher costs. Each alternative requires that production from unit operations that do not generate or discharge process wastewater shall not be included in the calculation of operating rates.

Alternative A: This is the basis for today's proposed limits. It retains the essential requirements of the current rule as described above (see § 420.3). However, today's proposal provides additional instructions for avoiding approaches that result in unrealistically high estimates of actual production by only considering production from all production units that could occur simultaneously (see § 420.3(c)). This may result in higher costs for those mills with current permit conditions based on production levels that are higher than levels that could occur simultaneously at multiple process units. However, these costs were included in the economic analysis for the 1982 I&S regulation as well as today's proposal.

Alternative B: The Agency is considering including in the rule a requirement for the permit writer to establish multi-tiered permit limits. Permit writers and control authorities

currently use their best professional judgment for establishing multi-tiered permits. The Agency has issued guidance for use in considering multi-tiered permits (see Chapter 5 of the ''U.S. EPA NPDES Permit Writers' Manual,'' (EPA–833–8–96–003, December 1996) and Chapter 7 of the ''Industrial User Permitting Guidance Manual,'' (EPA 833/R–89–001, September 29, 1989).

In situations where a single set of effluent limitations are not appropriate for the permit's entire period, a tiered permit may be established. One set of limits would apply for periods of average production along with other sets which take effect when there are significant changes in the average production rate. The guidance notes that a 10 to 15 percent deviation above or below the long-term average production rate is within the range of normal variability. Predictable changes in the long-term production higher than this range would warrant consideration of a tiered or multi-tiered permit. The iron and steel industry has a variable historical production rate where the permit modification process is not fast enough to respond to the need for higher or lower equivalent limits. example, many iron and steel mills have a characteristic historical average monthly production rate that varies between 60 to 95 percent of plant capacity. (Note that for a mill operating at 60 percent of capacity, a production increase to 95 percent of capacity would represent nearly a 60 percent jump in production.) In these cases, alternate effluent limitations might be established for average production rates associated, for example, with 75 and 95 percent of capacity.

Alternative C: To provide a basis for deriving NPDES and pretreatment permit production rates that is consistent with the term reasonable measure of actual production and that can be applied consistently for steel mills subject to part 420, EPA is also considering revising the definition of production. The modified definition of the NPDES and pretreatment permit production basis would be the average daily operating rate for the year with the highest annual production over the past five years, taking into account the annual hours of operation of the production unit and the typical operating schedule of the production unit, as illustrated by the following example:

Highest annual production from previous five years.	3,570,000 tons.
Operating hours	8,400 hours.
Hourly operating rate	425 tons/hour.
Average daily operating rate (24 hour day).	10,200 tons/day.

The above example is for a process unit that is operated typically 24 hours per day with short-term outages for maintenance on a weekly or monthly basis. steel processing facilities that are operated typically less than 24 hours per day, the average daily operating rate must be determined based on the typical operating schedule (*e.g.*, 8 hours per day for a facility operated one 8-hour turn (or shift) per day; 16 hours per day for a facility operated for two 8-hour turns per day). example:

Highest annual production from previous five years.	980,000 tons.
Operating hours	4,160 hours.
Hourly operating rate	235.6 tons/hour.
Average daily operating rate (16 hour day).	3,769 tons/day.

In this example, EPA recognizes that the approach could cause problems for a facility that was operated 16 hours/day at the time the permit was issued and then wished to change to 24 hours/day based on unforseen changes in market conditions. To address this issue, the approach could be combined with the tiered permit approach discussed above.

multiple similar process units discharging to the same wastewater treatment system with one NPDES or pretreatment permit compliance point (*e.g.*, two blast furnaces operated with one treatment and recycle system for process waters), under this approach the year with the highest annual production over the previous five years would be determined on the basis of the sum of annual production for both furnaces. Then, based on this year's average daily operating rate would be calculated as above independently for each furnace using total annual production and annual operating hours for each furnace. The daily production values would be summed to calculate the average daily operating rate for the combination of the two furnaces. example, consider the following production data:

	Furnace A	Furnace B	Total (tons)
1995	1,850,000	1,305,000	3,155,000
1996	1,675,000	1,425,000	3,100,000
1997	1,760,000	1,406,000	3,166,000
1998	1,580,000	1,328,000	2,908,000
1999	1,825,000	1,380,000	3,205,000

Annual maximum production rates for each furnace and the combination of the two furnaces are underlined. In this example, 1999 was the maximum production year for the combination of the furnaces and the data from each furnace that year would be used to calculate the average daily operating rates. Had the 1995 data from Furnace A and the 1996 data from Furnace B been used in combination (3,275,000 tons), an unrealistic measure of actual production might have resulted if the two furnaces could not produce at these high levels concurrently. example, if the downstream intermediate production capacity effectively limits the combined production of the two furnaces. On the other hand, if the two furnaces could produce at these high levels concurrently, and might reasonablely be expected to over the forthcoming five-year permit cycle if strong market conditions prevailed, then the production measure based on the 1995 Furnace A data and the 1996 Furnace B data might not be an unrealistic measure of actual production.

In contrast to the previous example, for multiple process units that are not similar, but have process wastewater co-treated in one centralized wastewater treatment system with one NPDES or pretreatment permit compliance point, the year with the highest production over the previous five years would be determined separately for each production unit or combination of similar production units with the highest annual production. example, where process wastewater for BOF steelmaking, vacuum degassing, and

continuous casting operations are discharged through one NPDES permit or pretreatment permit compliance point. Consider the following example:

	BOF	V. Degasser	C. Caster (tons)
1995	2,675,000	1,305,000	2,658,000
1996	2,900,000	1,600,000	2,885,000
1997	3,150,000	1,690,000	3,140,000
1998	3,280,000	1,668,000	3,270,000
1999	3,225,000	1,380,000	3,215,000

In this example, 1998 production data for the BOF, 1997 data from the vacuum degasser, and 1998 data for the continuous caster would be used to develop the NPDES permit effluent limitations. An analogous situation would be for a steel finishing plant with acid pickling, cold rolling and electroplating operations.

The permit applicant would, under this alternative, need to provide the following information with its permit application or pretreatment report: for each process operation regulated, the average daily operating rate determined in accordance with § 420.3, including the underlying production data and operating schedule information necessary to calculate the average daily operating rate; and, sufficient information to identify each process operation in terms of the definitions of process operations set out in this part.

Alternative D: The Agency is considering establishing production-based maximum monthly average effluent limitations and standards in combination with daily-maximum concentration-based effluent limitations and standards. Under this alternative, the maximum monthly average NPDES permit and pretreatment mass basis requirements would be determined using the part 420 production-based standards in combination with a reasonable measure of actual production, such as Alternative C above. However, the daily-maximum requirements would be in the form of effluent concentrations that would be included in part 420 in lieu of the daily-maximum production-based mass effluent limitations guidelines and standards. The daily maximum concentrations set out as effluent limitations guidelines and standards would be those concentrations that were used to develop the proposed production-based mass effluent limitations guidelines and standards.

The Agency believes this approach would effectively address the potential issue cited above regarding short-term peaks in production under most circumstances. There would be no additional burden on the industry and permit writers for applying for and writing NPDES or pretreatment permits. Permit authorities may need to revise their automated compliance tracking systems to account for both mass and concentration limitations at the same outfall, which is a common feature in many NPDES and pretreatment permits issued prior to this proposal.

This approach would also provide some flexibility for the industry where, because of historical conditions, relatively high volumes of storm water from intense rainfall events are collected and treated with process water. In some cases, the volume of storm water collected and treated may cause short-term peak discharge flows that exceed the normal process water discharge flow which may result in violation of daily-maximum limitations. On balance, the Agency believes that treatment of such storm water flows is beneficial. The combination of maximum monthly average mass limits and daily-maximum concentration limits would provide such flexibility.

EPA solicits comments about these alternatives to the proposed production bases for calculating NPDES permit effluent limitations and pretreatment requirements including comments on related costs and any technical difficulties that mills might have in meeting limits during short periods of high production. EPA also solicits other options for consideration.

E. Water Bubble

The ''water bubble'' is a regulatory flexibility mechanism described in the current regulation at 40 CFR 420.03 to allow for trading of identical pollutants at any single steel facility with multiple compliance points. The bubble has been used at some facilities to realize cost savings and/or for compliance. It is structured in a way to produce also a benefit for the environment.

As currently structured the water bubble has the following restrictions:

- Trades can be made only for like pollutants (*e.g.* lead for lead, not lead for zinc).
- Trades are subject to any applicable water quality-based effluent limitations.
- Each outfall must have specific fixed limitations
- Cokemaking and cold rolling are excluded from consideration for water bubble use.
- Each trade must result in a minimum net reduction amount of the amount traded (15% for TSS/Oil & Grease, 10% for toxic pollutants).
- Bubble restricted to existing sources.

While at present NPDES permits for only nine facilities have alternative effluent limitations derived from the water bubble, there may be increased interest in the water bubble with the promulgation of a revised part 420. With this in mind, EPA proposes making the following changes to the water bubble rule:

- Allow trades for cokemaking operations but only if the cokemaking alternative limitations are more stringent than the limitations in Subpart A. These more stringent limits would be offset by less stringent limits for some other operation. EPA is proposing to limit trades involving cokemaking in this way because it is concerned about co-occurring contaminants in cokemaking wastewaters for which limits are not being established (*e.g.*, benzo(b)fluoranthene, benzo(a)anthracene, and chrysene). Allowing a relaxation of the limits for cokemaking wastewater could allow undetected increases in discharges of these co-occurring contaminants that would not necessarily be offset by tighter limits on the regulated pollutants in another waste stream.
- Prohibit trades for sintering operations because of the presence of dioxins and furans in sinter wastewater unless the alternative limitations are more stringent than the sintering process wastewater limitations in subpart B. As with cokemaking, these more stringent sintering limits would be offset by less stringent limits on some

other waste stream. The logic for this restriction is the same as for cokemaking.

• Prohibit trades of oil and grease because of differences in the types of oil and grease used among the I&S operations (the finishing operations tend to use and discharge synthetic and animal fats and oils used to lubricate metal materials, the hot-end operations tend to discharge petroleum-based oil and grease used to lubricate machinery, and cokemaking operations tend to discharge oil and grease containing polynuclear aromatics generated by the combustion of coal).

• Allow trades for cold rolling operations.

• Allow trades for new, as well as existing sources. Since the existing source environmental gain is 10 percent for all parameters except for TSS which is 15 percent, EPA is considering whether a higher net gain, *e.g.*, 20 percent, is appropriate for new sources given their flexibility in design.

EPA is proposing to change the current regulations to prohibit trading between outfalls of oil and grease. As noted above, EPA is concerned that different types of oil and grease may be discharged by different process units, and that trading might thus allow an increase in a more environmentally harmful type of oil and grease (*e.g.*, petroleum based), with the offsetting reduction being from a less harmful type (*e.g.*, animal fats). EPA recognizes that facilities will generally identify trades that save them money. EPA has no data to suggest that the most economically beneficial trading opportunities (*i.e.*, those likely to be used by facilities) would systematically either decrease or increase the most harmful types of oil and grease. Giving the existing requirement for a 15 percent net decrease of oil and grease across all outfalls if trading is utilized, it may well be the case that even with the possibility that an individual trade might allow for an increase in, say, petroleum-based oil and grease, the net effect of trading would be both beneficial to the environment and provide cost saving opportunities to facilities. EPA requests comment on whether trading should continue to be allowed for oil and grease, including the current 15 percent (or greater) net reduction.

Potential cost impacts associated with changes in the water bubble have been accounted for in the estimated capital and operating and maintenance costs prepared for the economic impact and cost-effectiveness analyses.

EPA requests comment on the modified restrictions on the use of the bubble, particularly on the larger environmental gain through the use of the bubble that would be required for new sources.

EPA proposes to retain the other restrictions specified in the current water bubble rule.

XI. Other Coinciding Agency Activities

A. 40 CFR Part 63, Subpart L—National Air Emission Standard for Coke Oven Batteries

Promulgated on October 27, 1993, this regulation established coke oven emission limits for lids (% leaking lids), offtakes PLO (% leaking offtakes), charging (log), and doors PLD (% leaking doors). The regulation established two alternate tracks of limits through which coke ovens batteries may achieve compliance; the Maximum Achievable Control Technology (MACT) track and the Lowest Achievable Emissions Rate (LAER) extension track. All coke manufacturing facilities have chosen a specific track and, where appropriate, are attempting to conform with these regulations. Of the 58 by-product recovery coke batteries in operation in the United States, 50 have selected the LAER extension track, which subjects them to requirements through the year 2020. The LAER extension track limits may become more stringent in 2010. These plants will not be affected by the residual Risk Standards when promulgated. The remaining eight by-product recovery coke batteries that selected the MACT Track Limits must comply with Residual Risk Standards after they are promulgated.

B. Coke Ovens: Pushing, Quenching, and Battery Stacks Proposed Rule

EPA is developing a regulation under section 112(d) of the Clean Air Act (CAA) to reduce emissions from pushing, quenching, and battery stacks at coke plants and plans to propose the rule in November 2000 and promulgate it in November 2001. This rule would establish requirements to control coke oven emissions and would apply to all coke batteries at coke plants that are major sources of hazardous air pollutant (HAP) emissions or that are part of a facility that is a major source of HAP emissions. A major source means any stationary source or group of stationary sources within a contiguous area and under common control that emits or has the potential to emit considering controls, in aggregate, 10 tons or more per year of any single HAP or 25 tons per year of more of any combination of HAP.

The rule includes both emission limitations and work practice standards. Relative to pushing, two options are proposed. One option would require sources to meet an opacity limit based on the daily observations of four pushes. The other option is a work practice standard that places failing ovens under scrutiny until they are repaired or taken out of service. The proposed rule also includes emission limits for particulate matter (PM), as a surrogate for coke oven emissions, for control devices applied to pushing emissions. To address quenching emissions, sources would be required to use clean water as makeup water, equip quench towers with baffles, and inspect and repair baffles on an on-going basis. battery stacks, the proposed rule establishes opacity limits and requires the installation and operation of continuous opacity monitors (COM). In addition, all batteries would be required to operate at all times according to an operation and maintenance plan to ensure good operation and maintenance of batteries and control equipment. The proposed rule also includes notification, recordkeeping, and reporting requirements.

C. Steel Pickling—HCL Process

The Steel Pickling National Emission Standards for Hazardous Air Pollutants (NESHAP) final rule was published on June 22, 1999, 64 FR, 33202–33223, to reduce emissions of toxic air pollutants from sources in steel pickling facilities.

The steel pickling rule applies to all facilities that pickle steel using hydrochloric acid or that regenerate hydrochloric acid and (a) that are major sources or (b) are part of a facility that is a major source. The EPA estimates that 62 of the 80 steel pickling facilities using hydrochloric acid and all 8 acid regeneration plants currently in operation (six of which are co-located with pickling facilities) are affected by this rule. The steel pickling rule does not apply to any pickling line that uses an acid other than hydrochloric acid, an acid solution containing less than 6 percent HCl, or at a temperature less than 100 °F.

Existing plants have up to two years from the effective date of the final rule to comply with its requirements. If necessary, the owner or operator of an affected facility may request that EPA (or the applicable regulatory authority in a State with an approved permit program) grant one additional year to install controls. The EPA's rule establishes limitations for hydrochloric acid and chlorine emissions and offers flexibility to the industry by providing

cost-effective options for both emissions control and monitoring.

Pickling facility operators may comply with the emission limitation for hydrochloric acid by meeting either an emissions reduction target or a concentration standard. This option allows operators to comply with the rule under a wide variety of acid bath and ventilation conditions. Emissions reductions for hydrochloric acid are based on wet scrubber control technology, which provides the facility operator the option of recycling hydrochloric acid from the scrubber effluent.

Interested parties can download the final rule from EPA's web site on the Internet under ''recent actions'' at the following address: http://www.epa.gov/ttn/oarpg. further information about the rule, contact James Maysilles of the EPA's Office of Air Quality Planning and Standards at 919–541–3265.

D. Integrated Iron and Steel Manufacturing NESHAP

EPA plans to propose an Integrated Iron and Steel Manufacturing NESHAP under section 112(d) of the CAA applicable to sinter plants, blast furnaces, BOF shops and ancillary operations in November 2000 and to promulgate it in November 2001. The EPA has included integrated iron and steel manufacturing facilities on the list of major sources of hazardous air pollutant (HAP) emissions under section 112(c) of the CAA. Information on this action is at: http://www.epa.gov/ttn/oarp.

You may be subject to the rule if you own or operate an integrated iron and steel facility that is a major source of HAP emissions, or that is part of a facility that is a major source of HAP emissions. This source category includes sinter production, iron production, and steel production.

XII. Related Acts of Congress, Executive Orders, and Agency Initiatives

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is ''significant'' and therefore subject to OMB review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a ''significant regulatory action.'' As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. Regulatory Flexibility Act as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis for 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.

purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business that has between 500 and 1500 employees (each firm was assigned the relevant definition depending on SIC determination and based on SBA size standards); (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 today's proposed rule on small entities, including consideration of alterative regulatory approaches being proposed, I certify that this action will not have significant economic impact on a substantial number of small entities. EPA identified an estimated 34 small companies that may be affected by the rule among the estimated 115 total companies potentially affected by the rule. EPA has fully evaluated the economic impact of the proposed rule on affected small companies. In some instances, EPA proposes alternative regulatory approaches. This analysis reflects the most stringent of the alternative options. small companies, EPA examined the compliance cost to revenue ratio to identify the potential impact of the rule on small companies. EPA has determined that the range of compliance costs to revenues is between 0 and 1.91 percent with only three companies experiencing an impact of greater than 1%, using the most stringent set of co-proposed options. Furthermore, an economic achievability analysis was conducted using a discounted cash flow approach for facility impacts analysis and the Altman Z test for the firm impacts analysis (for a full discussion, see Section VI). EPA projects that one small company may incur an impact such as facility closure or firm failure. No small governments are regulated by this action.

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. The Agency has attempted to mitigate the potential impacts of the proposed rule to all entities, including small entities, by measures such as simplifying the structure of the existing regulation and encouraging the co-treatment of compatible wastewaters. EPA has engaged in very substantive outreach to the potentially affected entities via public meetings and trade association consultations. The outreach activities are described in detail in Section IV.D.5 of this preamble. 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.

C. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-

effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. EPA has estimated total annualized costs of the rule as between $56.5 million to $61.4 million (1999 $, pre-tax). Accordingly, today's proposal is not subject to the requirements of sections 202 and 205 of the UMRA. EPA has, however, sought meaningful and timely input from the private sector, states, and small governments on the development of this notice. Prior to issuing this proposed rule, EPA met with members of the private sector as discussed earlier in the preamble.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments, including tribal governments. EPA recognizes that small governments may own or operate POTWs that will need to enter into pretreatment agreements with the indirect dischargers of the Iron and Steel industry that would be subject to this proposed rule. However, EPA currently estimates that the added costs of entering into or modifying existing pretreatment agreements will be minimal. The main costs resulting from this proposed rule will fall upon the private entities that own and operate the Iron and Steel facilities.

D. Paperwork Reduction Act

The proposed iron and steel effluent limitations guidelines and standards contain no information collection activities and, therefore, no information collection request will be submitted to OMB for review under the provisions of the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 *et seq.*

E. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995, (Pub L. 104–113 sec. 12(d) 15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standard bodies. The NTTAA directs EPA to provide Congress, through the Office of Management and Budget (OMB), explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This rulemaking involves technical standards. The rule requires dischargers to measure for 7 metals, 4 organic contaminants, TSS, Oil and Grease (HEM), thiocyanate, total cyanide, total residual chlorine, ammonia as Nitrogen, 2,3,7,8-TCDF, nitrate and pH. EPA performed a search to identify potentially voluntary consensus standards that could be used to measure the analytes in today's final guideline. EPA's search revealed that consensus standards have already been promulgated in tables at 40 CFR 136.3 for measurement of all analytes except thiocyanate.

Today, EPA is proposing to promulgate two consensus standards for thiocyanate, Method 4500–CN M (Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998) and D4374–98 (Annual Book of ASTM Standards, volume 11.02, 1999). EPA welcomes comments on this aspect f the proposed rulemaking and, specifically, invites the public to identify additional potentially applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

F. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The Executive Order ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency. This proposed rule is not subject to E.O. 13045 because it is not ''economically significant'' as defined under Executive Order 12866 (EPA estimates that it would have an annual effect on the economy of less than $100 million), and is a technology-based rule that does not involve health standards or address an environmental health or safety risk that may have a disproportional effect on children.

G. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that 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.''

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. The proposed rule establishes effluent limitations imposing requirements that apply to iron and steel facilities when they discharge process wastewater or introduce process wastewater to a POTW. EPA has determined that there are no iron and steel facilities owned and operated by State and local governments that would be subject to this proposed rule; therefore, this proposed rule will not impose any treatment technology costs on State or local governments. Further, this proposed rule will only affect State and local governments incidentally in their capacity as implementers of CWA permitting programs. Therefore, the proposed rule, at most, imposes only

minimal administrative costs on States that have authorized NPDES programs and on local governments that are administering approved pretreatment programs. (These State and local governments must incorporate the new effluent limitations guidelines and standards in new and reissued NPDES permits or local pretreatment orders or permits). Thus, Executive Order 13132 does not apply to this rule.

Although Executive Order 13132 does not apply to this rule, EPA did consult with State government representatives in developing this proposal, as discussed in Section IV of this document. A summary of the concerns raised during consultation and EPA's response to those concerns is provided in Section IV.D.5 of this preamble. In addition, in the spirit of this Executive Order 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.

H. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments nor does it impose substantial direct compliance costs on them. EPA has determined that no communities of Indian tribal governments are affected by this rule. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

I. Plain Language Directive

Executive Order 12866 and the President's memorandum of June 1, 1998, require each agency to write all rules in plain language. We invite your comments on how to make this proposed rule easier to understand. example: Have we organized the material to suit your needs? Are the requirements in the rule clearly stated? Does the rule contain technical language or jargon that isn't clear? Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand? Would more (but shorter) sections be better? Could we improve clarity by adding tables, lists, or diagrams? What else could we do to make the rule easier to understand?

XIII. Solicitation of Data and Comments

A. Introduction and General Solicitation

EPA invites and encourages public participation in this rulemaking. The Agency asks that comments address any perceived deficiencies in the record of this proposal and that suggested revisions or corrections be supported by data.

The Agency invites all parties to coordinate their data collection activities with EPA in order to facilitate mutually beneficial and cost-effective data submissions. EPA is interested in participating in study plans, data collection and documentation. Please refer to the '' Further Information'' section at the beginning of this preamble for technical contacts at EPA. Comments on the proposal must be received by February 26, 2001.

B. Specific Data and Comment Solicitations

1. Revised Production Basis for Regulation

EPA believes that some NPDES and pretreatment permit production rates have been derived in a manner that is not consistent with the term ''reasonable measure of actual production'' specified at §§ 122.45(b)(2)(i), 403.6(c)(3), and 420.04. Thus EPA is soliciting comment on four alternate approaches for establishing permit effluent limitations. These are described in detail in Section X.D.2, and summarized below:

Alternative A: Retaining essential requirements of the current rule while providing additional instructions for avoiding unrealistically high estimates of actual production

Alternative B: Including a requirement for the permit writer to establish multi-tiered permit limits

Alternative C: Revising the definition of production to be the average daily operating rate for the year with the highest annual production over the past five years

Alternative D: Establishing production-based maximum monthly average effluent limitations and standards in combination with daily-maximum concentration-based effluent limitations and standards.

2. Revised Subcategorization

The revised subcategorization described in Section IV.E simplifies the structure and use of the regulation. The proposed subcategorization removes defunct manufacturing processes, eliminates subsegments in the hot forming and finishing subcategories, creates a new subcategory for non-integrated steelmaking and hot forming processes, and creates new subcategories or segments for manufacturing processes not currently regulated. The Agency requests comments on the new subcategorization and its effects on the implementation of today's proposed rule.

3. Applicability Changes

As described in Section III, the Agency determined that certain facilities covered by the current Iron and Steel rule have manufacturing processes that more closely resemble those in facilities to be covered by the MP&M rule. These processes include: The cold forming for steel bar, rod, wire, pipe or tube; batch hot dip coating of steel; and wire drawing and coating. EPA is proposing to move these operations into the MP&M category, which will be regulated under 40 CFR part 438. The Agency also proposes coverage of the following operations not covered by the current Iron and Steel rule: continuous electroplating of flat steel products, direct-reduced ironmaking, briquetting, and steel forging operations. EPA solicits comments on these proposed applicability changes. EPA also solicits comments on its proposal to regulate continuous strip electroplating operations in the part 420.

4. Changes in Water Bubble

As discussed in Section X.E, EPA is proposing making the following changes to the water bubble rule:

- Allow trades for cokemaking where more stringent limits for cokemaking would result;
- Prohibit trades for sintering operations where less stringent

limitations for sintering would result, since discharge of dioxins could result;

- Allow trades for cold rolling operations which are currently excluded from the water bubble provisions; and
- Prohibit trades for oil & grease.

The Agency solicits comments on the economic and environmental impacts of the proposed changes.

5. Approach to PSES and PSNS for ammonia-N in Ironmaking Wastewaters

In Section IX.B, EPA proposes regulatory flexibility that would allow indirectly discharging ironmaking operations to not have to meet the pretretment standards for ammonia-N if the facility certifies to the pretreatment control authority under 40 CFR 403.12 that they discharge to POTWs with the capability, when considered together with the indirect discharger's removals, to achieve removals at least equivalent to those expected under BAT for ammonia-N. The Agency solicits comment on this certification alternative, particularly from POTWs currently receiving process wastewaters from ironmaking operations.

6. Alternative Approaches for Regulating Integrated and Stand-Alone Hot ming Mills

EPA is proposing two different BAT approaches for the carbon and alloy segment of the Integrated and Stand-Alone Hot ming Subcategory. The technology basis for these options is identical and consists of a scale pit with oil skimming, roughing clarifier, cooling tower with high-rate recycle and mixed-media filtration of blowdown.

The difference between BAT Option A and BAT Option B involves the amount of time that facilities in the segment would have to achieve BAT limitations. Under BAT Option A, all facilities would be subject to BAT limitations as soon as they are placed in the facility's NPDES permit. Under BAT Option B, in contrast, all facilities could obtain additional time to achieve BAT limitations. If EPA ultimately determines in April 2002 that BAT Option A is not economically achievable for the segment as a whole, it may decide to take final action based on BAT Option B.

more details on Options A and B, refer to Section IX.D. EPA solicits comment on both of these options. EPA also solicits comment on whether there is any rational basis to distinguish among mills in this segment, so as to apply BAT Option B only to a specific subsegment of mills for which the model technology is not economically achievable at the time of promulgation.

7. Compliance Monitoring Location for pH

Stakeholders have indicated that permit authorities often interpret the current regulation to require application of pH limitations at internal monitoring locations, prior to additional treatment or mixing with other wastewater. EPA is proposing to allow permit authorities the flexibility to establish pH effluent limitations at final outfalls such that redundant and unnecessary pH neutralization can be avoided.

8. ELGs and Standards in lbs/ton vs kg/kkg or lbs/1000 lbs

The current part 420 regulation and other previous mass-based regulations have presented pollutant limitations in terms of kilograms of allowable pollutant discharge per thousand kilograms of production (kg/kkg), also expressed as pounds of allowable pollutant discharge per thousand pounds of production (lbs/1,000 lbs). Today's proposed regulation presents pollutant limitations in terms of pounds of allowable pollutant discharge per ton of production (lbs/ton). The Agency made this change to express the limitations in terms of the production value that is a standard throughout the industry. The Agency requests comments on this format.

9. POTW Performance Criteria

In Section IX.A(2) and (3), EPA describes the traditional methodology used to determine POTW performance and the proposed revisions to that methodology, respectively. EPA used the traditional methodology to estimate POTW percent removals, which are a component of the pass-through methodology used to identify the pollutants to be regulated for PSES and PSNS and the analysis to determine net pollutant reductions. Previously, EPA edited data at or near the minimum level for POTW performance based on the editing criteria used to calculate BAT limitations. EPA is considering revising the POTW data editing criteria. Given the range of analytical minimum levels and their influence on calculated percent removals, EPA is considering several editing alternatives, detailed in Section IX.A(3). The Agency solicits comments on potential revisions to the pass-through methodology.

10. Mercury and Selenium in Cokemaking Wastewater

EPA is proposing regulation of mercury and selenium at cokemaking plants based on toxicity and presence in cokemaking wastewaters as discussed in Section IX.B(1) Currently, permits for several cokemaking sites require monitoring for mercury and selenium. EPA solicits comments on the need for limits for mercury and selenium, including any additional data available to support or oppose the need for limits.

11. Regulatory Approach for Dioxins and Furans at Sinter Plants

In Section IX, dioxins and furans were identified as pollutants of concern for sinter plants using wet air pollution controls. EPA proposes to limit dioxins and furans in wastewaters from sinter plants. The proposed limit would be for 2,3,7,8–TCDF and would be set to less than the minimum level. EPA proposes to require compliance monitoring after primary treatment of sinter plant wastewaters or after sinter plant and blast furnace wastewaters are co-treated, but before any additional process or non-process flows are combined with the wastewater. EPA solicits comments on this proposed regulatory approach. The Agency is also considering whether to limit dioxins and furans found in sinter plant wastewaters on the basis of 2,3,7,8-TCDD TEQs (toxicity equivalents) which would measure all of the 17 dioxin and furan congeners with chlorine substitutions at the 2,3,7 and 8 lateral positions. This is consistent with the international toxicity equivalents factors approach; consistent with EPA's approach to regulating dioxins in other media and for conducting risk assessments; and consistent with EPA's source characterization work to assess the national inventory of dioxin releases to environmental media.

12. Consideration of Zero Discharge as NSPS for the Non-Integrated Steelmaking and Hot ming Subcategory

As described in Section IV.F(5)c, non-integrated mills have demonstrated lower discharge flow rates than continuous casters and hot forming mills at integrated and stand alone mills. Many non-integrated sites report zero discharge of process wastewater using high-rate recycle systems for the entire mill. EPA determined that new facilities can incorporate process water treatment and water pollution control at the design stage, thus avoiding costs associated with retrofit situations. The Agency solicits comments on establishing zero discharge limitations at NSPS for the Non-Integrated Steelmaking and Hot ming Subcategory.

13. Zero Discharge for all EAFs

As described in Section IV.F(5)a, the proposed Non-Integrated Steelmaking and Hot ming Subcategory includes a segment for EAF steelmaking. Since the only EAF remaining in the United States

that discharges wastewater is now only used for emergency purposes, EPA did not cost the site to replace the wet air pollution control unit. If the unit is still being used at the time this rule is promulgated, BPJ will apply. The Agency solicits comments on excluding a segment for EAFs with wet air pollution control.

14. Surface Quality Issues for Steel Finishing Operations

the purposes of this proposal, the Agency has selected the median production-normalized flow rate (PNF) reported by the industry for steel finishing operations. This approach was intended to address product quality issues associated with water use. A number of mills engaging in steel finishing operations claim to need a relatively high PNF (*i.e.,* higher than the median PNF selected by EPA for this proposed subcategory). Therefore, the Agency requests comments on surface quality and any other issues that impact water use and necessitate high water use rates in steel finishing operations.

15. Limits for Nitrates/Nitrites at Stainless Finishing Facilities

In Section IX, nitrate/nitrite was identified as a pollutant of concern for stainless steel acid pickling operations where nitric acids and combinations of nitric and hydrofluoric acids are used for surface treatments for various grades of stainless steels. The model BAT technology for stainless steel finishing operations includes acid purification units for recovery and reuse of spent nitric and nitric/hydrofluoric acid pickling solutions. EPA is considering developing a limit, based on acid purification technology, for nitrate/nitrite (in the form of nitrate-nitrite-N) for stainless steel finishing operations with combination acid pickling. EPA solicits effluent quality monitoring data from stainless steel acid pickling operations using acid purification and from POTWs that receive wastewater from these operations.

EPA is aware of other process changes which may result in decreased nitrate concentrations in stainless steel acid pickling wastewaters, including chemical substitution for nitric acid. EPA solicits information on this or any other process capable of achieving substantial reduction or elimination of nitrates from stainless steel pickling wastewaters, particularly process details; for which grades of stainless steel the process can be used; performance data; and detailed cost estimates.

16. Revision of Subcategorization for BPT Effluent Limitations

EPA is considering converting the existing mass-based BPT limitations for conventional pollutants TSS and O&G to corresponding concentration-based BPT limitations via the production normalized flows used to develop the existing BPT limitations. By this conversion, EPA does not intend to change the substance of the current BPT limitations in any way. Rather, EPA intends to simplify application of the current BPT limitations in view of the new subcategorization arrangement. EPA solicits comments on this approach.

17. Best Management Practices

EPA is planning to include in guidance documents or in the technical development document for the final rule a number of recommended Best Management Practices (BMPs) for use in the NPDES and pretreatment programs. These BMPs would not be codified in part 420, but could be used by permit writers on a facility-by-facility basis as deemed appropriate to address site-specific issues. Among the BMPs being considered in this fashion are those listed at Section 6.5 of the Preliminary Study (EPA 821–R–95–037) and others dealing with management of oily wastewaters from hot forming operations and periodic reviews and assessments of the integrity of process water collection systems and wastewater treatment system operations. EPA solicits comments on this approach.

18. Cash Flow in the Economic Analysis

In the economic analysis, cash flow at the site-level is defined as the sum of net income and depreciation. The measure is widely used within industry in evaluating capital investment decisions because both net income and depreciation (which is an accounting offset against income, but not an actual cash expenditure) are potentially available to finance future investment. However, assuming that total cash flow is available over an extended time horizon (for example, 15 years) to finance investments related to environmental compliance could overstate a site's ability to comply. In particular, the cost of capital equipment (not associated with regulatory compliance) is not netted out of cash flow, as it is of income through the subtraction of depreciation. Thus, any costs associated with either replacing existing capital equipment, or repaying money that was previously borrowed to pay for it, are omitted from the site-level analysis. EPA solicits comment on its use of cash flow as a measure of resources available to finance environmental compliance and suggestions for alternative methodologies.

Appendix A: Definitions, Acronyms, and Abbreviations Used in This Notice

Administrator—The Administrator of the U.S. Environmental Protection Agency.

Agency—The U.S. Environmental Protection Agency.

Average Monthly Discharge Limitation—The highest allowable average of ''daily discharges'' over a calendar month, calculated as the sum of all ''daily discharges'' measured during the calendar month divided by the number of ''daily discharges'' measured during the month.

BAT—The best available technology economically achievable, applicable to effluent limitations for industrial discharges to surface waters, as defined by section 304(b)(2)(B) of the CWA.

BCT—The best control technology for conventional pollutants, applicable to discharges of conventional pollutants from existing industrial point sources, as defined by section 304(b)(4) of the CWA.

BPT—The best practicable control technology currently available, applicable to effluent limitations, for industrial discharges to surface waters, as defined by section 304(b)(1) of the CWA.

Clean Water Act (CWA)—The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. Section 1251 *et seq.*), as amended *e.g.,* by the Clean Water Act of 1977 (Pub. L. 95–217), and the Water Quality Act of 1987 (Pub. L. 100–4).

Clean Water Act (CWA) Section 308 Questionnaire—A qestionnaire sent to facilities under the authority of section 308 of the CWA, which requests information to be used in the development of national effluent guidelines and standards.

Conventional Pollutants—Constituents of wastewater as determined by section 304(a)(4) of the CWA (and EPA regulations), *i.e.,* pollutants classified as biochemical oxygen demand, total suspended solids, oil and grease, fecal coliform, and pH.

Daily Discharge—The discharge of a pollutant measured during any calendar day or any 24-hour period that reasonably represents a calendar day.

Direct Discharger—A facility that discharges or may discharge treated or untreated wastewaters into waters of the United States.

Effluent Limitation—Under CWA section 502(1), any restriction, including schedules of compliance, established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean (CWA sections 301(b) and 304(b)).

Existing Source— this rule, any facility from which there is or may be a discharge of pollutants, the construction of which is commenced before the publication of the final regulations prescribing a standard of performance under section 306 of the CWA.

Facility—All contiguous property owned, operated, leased, or under the control of the same person or entity.

Hazardous Waste—Any waste, including wastewater, defined as hazardous under RCRA, TSCA, or any state law.

Indirect Discharger—A facility that discharges or may discharge wastewaters into a publicly-owned treatment works.

LTA (Long-Term Average)— purposes of the effluent guidelines, average pollutant levels achieved over a period of time by a facility, subcategory, or technology option. LTAs were used in developing the effluent limitations guidelines and standards in today's proposed regulation.

Minimum Level—the lowest level at which the entire analytical system must give a recognizable signal and an acceptable calibration point for the analyte.

NAICS—North American Industry Classification System. NAICS was developed jointly by the U.S., Canada, and Mexico to provide new comparability in statistics about business activity across North America.

National Pollutant Discharge Elimination System (NPDES) Permit—A permit to discharge wastewater into waters of the United States issued under the National Pollutant Discharge Elimination system, authorized by section 402 of the CWA.

Non-Conventional Pollutants—Pollutants that are neither conventional pollutants nor priority pollutants listed at 40 CFR part 401.

Non-Water Quality Environmental Impact—Deleterious aspects of control and treatment technologies applicable to point source category wastes, including, but not limited to air pollution, noise, radiation, sludge and solid waste generation, and energy used. NSPS—New Sources Performance Standards, applicable to industrial facilities whose construction is begun after the effective date of the final regulations (if those regulations are promulgated after April 26, 2001). EPA is scheduled to take final action on this proposal in April 2002. See 40 CFR 122.2.

Outfall—The mouth of conduit drains and other conduits from which a facility effluent discharges into receiving waters.

Pass Through—A pollutant is determined to ''pass through'' a POTW when the average percentage removed by an efficiently operated POTW is less than the average percentage removed by the industry's direct dischargers that are using well-designed, well-operated BAT technology.

Point Source—Any discernable, confined, and discrete conveyance from which pollutants are or may be discharged. See CWA section 502(14).

Pollutants of Concern (POCs)—Pollutants commonly found in iron and steel wastewaters. Generally, a chemical is considered as a POC if it was detected in untreated process wastewater at 10 times the minimum level (ML) in more than 10% of the samples.

Priority Pollutant—One hundred twenty-six compounds that are a subset of the 65 toxic pollutants and classes of pollutants outlined in section 307 of the CWA. See 40 CFR part 403, Appendix A (reprinted after 40 CFR 423.17).

PSES—Pretreatment standards for existing sources of indirect discharges, under Section 307(b) of the CWA, applicable to indirect dischargers that commenced construction after December 27, 2001. See 40 CFR 403.3 (K)(1).

PSNS—Pretreatment standards for new sources under section 307(c) of the CWA.

Publicly Owned Treatment Works (POTW)—Any device or system, owned by a state or municipality, used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature that is owned by a state or municipality. This includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment (40 CFR 122.2).

RCRA—The Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S.C. 6901 *et seq.*), which regulates the generation, treatment, storage, disposal, or recycling of solid and hazardous wastes.

SIC—Standard Industrial Classification (SIC)—A numerical categorization system used by the U.S. Department of Commerce to catalogue economic activity. SIC codes refer to the products, or group of products, produced or distributed, or to services rendered by an operating establishment. SIC codes are used to group establishments by the economic activities in which they are engaged. SIC codes often denote a facility's primary, secondary, tertiary, etc. economic activities.

Variability Factor—Used in calculating a limitation (or standard) to allow for reasonable variation in pollutant concentrations when processed through extensive and well designed treatment systems. Variability factors assure that normal fluctuations in a facility's treatment are accounted for in the limitations. By accounting for these reasonable excursions above the long-term average, EPA's use of variability factors results in limitations that are generally well above the actual long-term averages.

Zero or Alternative Discharge—No discharge of pollutants to waters of the United States or to a POTW. Also included in this definition is disposal of pollutants by way of evaporation, deep-well injection, off-site transfer, and land application.

List of Subjects in 40 CFR Part 420

Environmental protection, Iron, Steel, Waste treatment and disposal, Water pollution control.

Dated: October 31, 2000.

Carol M. Browner,

Administrator.

the reasons set out in the preamble, Title 40, Chapter I of the Code of Federal Regulations is amended by revising part 420 as follows:

Part 420—Iron and Steel Manufacturing Point Source Category

Sec.

420.1 General applicability.
420.2 General definitions.
420.3 Calculation of NPDES and pretreatment permit effluent limitations.
420.4 Alternative effluent limitations under the ''water bubble.''
420.5 Pretreatment standards compliance date.
420.6 Effluent limitations guidelines and standards for pH.
420.7 Supplemental NPDES permit application and pretreatment report requirements.

Subpart A—Cokemaking Subcategory

420.10 Applicability.
420.11 Subcategory definitions.
420.12 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).
420.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).
420.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).
420.15 New source performance standards (NSPS).
420.16 Pretreatment standards for existing sources (PSES).
420.17 Pretreatment standards for new sources (PSNS).

Subpart B—Ironmaking Subcategory

420.20 Applicability.
420.21 Subcategory definitions.
420.22 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).
420.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).
420.24 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).
420.25 New source performance standards (NSPS).
420.26 Pretreatment standards for existing sources (PSES).
420.27 Pretreatment standards for new sources (PSNS).
420.28 Point of compliance monitoring.

Subpart C—Integrated Steelmaking Subcategory

420.30 Applicability.
420.31 Subcategory definitions.
420.32 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).
420.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).
420.34 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).
420.35 New source performance standards (NSPS).
420.36 Pretreatment standards for existing sources (PSES).

420.37 Pretreatment standards for new sources (PSNS).

Subpart D—Integrated and Stand-Alone Hot ming Subcategory

420.40 Applicability.
420.41 Subcategory definitions.
420.42 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).
420.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).
420.44 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).
420.45 New source performance standards (NSPS).
420.46 Pretreatment standards for existing sources (PSES).
420.47 Pretreatment standards for new sources (PSNS).

Subpart E—Non-Integrated Steelmaking and Hot ming Subcategory

420.50 Applicability.
420.51 Subcategory definitions.
420.52 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).
420.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).
420.54 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).
420.55 New source performance standards (NSPS).
420.56 Pretreatment standards for existing sources (PSES).
420.57 Pretreatment standards for new sources (PSNS).

Subpart F—Steel Finishing Subcategory

420.60 Applicability.
420.61 Subcategory definitions.
420.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).
420.64 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).
420.65 New source performance standards (NSPS).
420.66 Pretreatment standards for existing sources (PSES).
420.67 Pretreatment standards for new sources (PSNS).

Subpart G—Other Operations Subcategory

420.70 Applicability.
420.71 Subcategory definitions.
420.72 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).
420.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).
420.74 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).
420.75 New source performance standards (NSPS).
420.76 Pretreatment standards for existing sources (PSES).
420.77 Pretreatment standards for new sources (PSNS).

Authority: Secs. 301, 304, 306, 307, 308, 402 and 501 of the Clean Water Act, as amended; 33 U.S.C. 1311, 1314, 1316, 1317, 1318, 1342 and 1361.

§ 420.1 General applicability.

(a) This part applies to discharges and the introduction of pollutants to publicly owned treatment works (POTWs) resulting from the manufacture of metallurgical coke (furnace coke and foundry coke), sinter, iron, steel and semi-finishing steel products including hot and cold finished flat-rolled carbon and alloy and stainless steels; flat-rolled and other steel shapes coated with other metals or combinations of metals; plates; structural shapes and members; and hot rolled pipes and tubes. Manufacturing activities that may be subject to this part are generally reported under one or more of the following North American Industry Classification System (NAISC) codes: 32419, 331111, 331210, 331221 and 331222 (North American Industry Classification System, U.S. Office of Management and Budget, Washington, DC, 1997).

(b) This part does not apply to discharges and the introduction of pollutants to POTWs resulting from cold finished bar or cold finished pipe and tube operations; wire drawing or coating operations; or, stand-alone, hot-dipped coating operations for products other than flat-rolled products.

§ 420.2 General definitions.

As used in this part:

(a) The general definitions and abbreviations in 40 CFR part 401 shall apply, except as modified in this part.

(b) *Alloy steels* means steels which contain one or more of the following alloying elements in excess of the specified percentage: Manganese, 1.65%; silicon, 0.5%; copper, 0.6%; or in which a definite range or a definite minimum quantity of any of the following elements is specified or required within the limits of the recognized field of constructional alloy steels: aluminum, boron, chromium (less than 10%), cobalt, lead, molybdenum, nickel, niobium (columbium), titanium, tungsten, vanadium, zirconium, or any other alloying element added to obtain a desired alloying effect.

(c) *Billet* means a semi-finished piece of steel, usually smaller than a bloom, resulting from hot-rolling an ingot. The piece may be square, but not more than twice as wide as thick . It is normally used for ''long'' products, such as bars, channels or other structural shapes.

(d) *Bloom* means a semi-finished piece of steel resulting from rolling or forging an ingot. The piece is square, or not more than twice as wide as thick, and has a cross-sectional area of at least 8 square inches but usually 36 square inches or more.

(e) *Carbon steels* are those steels for which no minimum content of elements other than carbon is specified or necessary to obtain a desired alloying effect and when the maximum content for any of the following elements do not exceed the percentage specified: Manganese, 1.65%; silicon, 0.5%; copper, 0.6%.

(f) *Maximum daily* means the highest allowable discharge of wastewater pollutants during any one day.

(g) *Maximum monthly average* means the highest allowable average of daily discharges of wastewater pollutants over a calendar month, and is calculated as the sum of all daily values measured during a calendar month divided by the number of daily values measured during that month.

(h) *Plate* means finished sheet steel with a width of more than 8 inches and a thickness ranging from 0.25 inch to more than 12 inches.

(i) *Regulated parameters with approved methods of analysis in Table 1B at 40 CFR 136.3* are defined as follows:

(1) *Ammonia* (as N) means ammonia reported as nitrogen.

(2) *Chromium* means total chromium.

(3) *Chromium (VI)* means hexavalent chromium.

(4) *Copper* means total copper.

(5) *Cyanide* means total cyanide.

(6) *HEM* means oil and grease measured as hexane extractable material.

(7) *Lead* means total lead.

(8) *Mercury* means total mercury.

(9) *Nickel* means total nickel.

(10) *Nitrate+Nitrite (as N)* means nitrite and nitrate reported as nitrogen.

(11) *Selenium* means total selenium.

(12) *TRC* means total residual chlorine.

(13) *TSS* means total suspended solids.

(14) *Zinc* means total zinc.

(j) *Regulated parameters with approved methods of analysis in Table 1C at 40 CFR 136.3* are as follows:

(1) *Benzo(a)pyrene*

(2) *Naphthalene*

(3) *Phenol*

(k) *Regulated parameter with approved method of analysis by EPA Method 1613B* is defined as follows:

(1) 2,3,7,8-TCDF means 2,3,7,8-tetrachlorodibenzofuran.

(l) *Process wastewaters* are defined at 40 CFR 401.11.

(m) *Non-process wastewaters* mean utility wastewaters (for example, water treatment residuals); treated or untreated wastewaters from groundwater remediation systems; dewatering water for building foundations; and other wastewater streams not associated with a production process.

(n) *Rod* means a semi-finished length of steel with circular cross-section (diameter 0.25 inch or less) that is rolled from a billet and coiled for further processing. Rod is commonly drawn into wire products or used to make bolts and nails.

(o) *Semi-finished steel* means blooms, billets or slabs that are later worked into finished shapes (bar, rod, plate, sheet).

(p) *Sheet* means a thin flat steel shape created by hot-rolling a cast slab flat while maintaining the side dimensions. Sheets are within the following size limitations: 0.0499 to 0.2299 inches thick and 12 to over 48 inches width, and are often coiled.

(q) *Slab* means a semi-finished piece of steel resulting from hot-rolling an ingot into an oblong shape, which is relatively wide and thin.

(r) *Specialty steels* are steels containing alloying elements that are added to enhance the properties of the steel product when individual alloying elements (*e.g.,* aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, vanadium, zirconium) exceed 3%, or when the total of all alloying elements exceeds 5 percent. Specialty steel categories include: Electrical, alloy, stainless and tool.

(s) *Stainless* means steel containing 10% or more chromium, with or without other alloying elements. It is a trade name given to corrosion and heat resistant steel in which the chief alloying elements are chromium, nickel and silicon in various combinations and possibly a small per cent of titanium, vanadium, and other elements.

(t) *Strip* means thin flat steel resembling hot-rolled sheet, but normally narrower (up to 12 inches wide) and produced to more closely controlled thicknesses (0.0255 to 0.2299 inches).

§ 420.3 Calculation of NPDES and pretreatment permit effluent limitations.

(a) The following protocols shall be used when calculating the daily operating rate (reasonable meaure of actual production), except as specifically provided for in subparts A through G of this part:

(1) Production levels from unit operations that do not generate or discharge process wastewater shall not be included in the calculation of the daily operating rate.

(2) similar, multiple production facilities with process waters treated in the same process wastewater treatment system (*e.g.,* two blast furnaces equipped with one process water treatment and recycle system), the reasonable measure of production (daily operating rate) shall be determined from the combined production of the similar production facilities during the same time period.

(3) process wastewater treatment systems where wastewaters from two or more different production facilities (*e.g.,* blast furnaces and sintering) are co-treated in the same process wastewater treatment system, the reasonable measure of production (daily operating rate) shall be determined for each production facility or combination of similar, multiple production facilities separately (not necessarily during the same time period) and summed. The reasonable measure of production for each set of similar, multiple production facilities shall be established using the protocols in § 420.3(a)(2).

(b) all process operations regulated by subparts A through G of this part, mass effluent limitations and pretreatment requirements for each process operation shall be computed by multiplying the reasonable measure of actual production by the respective effluent limitations guidelines or standards. The mass effluent limitations or pretreatment requirements applicable at a given NPDES or pretreatment compliance monitoring point shall be the sum of the mass effluent limitations or pretreatment requirements for each process operation with process wastewaters discharging to that compliance monitoring point.

(c) Mass NPDES permit effluent limitations or pretreatment requirements derived from this part shall remain in effect for the term of the NPDES permit or pretreatment control mechanism, except:

(1) When the permit is modified in accordance with § 122.62 of this chapter or local POTW permit modification provisions; or

(2) Where alternate effluent limitations are established for increased or decreased production levels in accordance with § 122.45(b)(2)(ii)(A)(*1*) of this chapter.

(d) Permit and pretreatment control authorities may provide for increased loadings for non-process wastewaters defined at § 420.2 and for storm water from the immediate process area in NPDES permits and pretreatment control mechanisms using best professional judgment, but only to the extent such non-process wastewaters result in an increased flow.

§ 420.4 Alternative effluent limitations under the ''water bubble''.

(a) Except as provided in paragraphs (d) through (g) of this section, any existing and new source direct discharging point source subject to this part may qualify for alternative effluent limitations to those specified in subparts A through G of this part, representing the degree of effluent reduction attainable by the application of best practicable control technology currently available, best available technology economically achievable, best conventional technology, and best demonstrated technology. The alternative effluent limitations for each pollutant are determined for a combination of outfalls by totaling the mass limitations allowed under subparts A through G of this part for each pollutant and subtracting from each total the net reduction amount specified for that pollutant in paragraph (b) of this section. The permit authority shall determine a net reduction amount for each pollutant subject to this section that is greater than the minimum percentage specified in paragraph (b) of this section upon consideration of additional available control measures that would result in effluent reductions and which can be achieved without requiring significant additional expenditures at any outfall(s) in the combination for which the discharge is projected to be better than required by this regulation.

(b) The water bubble may be used to calculate alternative effluent limitations only for identical pollutants (*e.g.* lead for lead, not lead for zinc).

(c) In the case of Total Suspended Solids (TSS), the minimum net reduction amount shall be at least 15 percent of the amount(s) for existing sources and 20 percent of the amount(s) for new sources by which the TSS discharges from any waste stream(s) in

the combination will meet otherwise allowable effluent limitations for TSS. all other pollutants, the minimum net reduction amount shall be at least 10 percent of the amount(s) for existing sources and 20 percent of the amount(s) for new sources by which the discharges from any waste stream(s) in the combination will meet otherwise allowable effluent limitations for each pollutant under this regulation.

(d) Use of the water bubble to develop alternate effluent limitations for oil & grease is prohibited.

(e) A discharger cannot qualify for alternative effluent limitations if the application of such alternative effluent limitations would cause or contribute to an exceedance of any applicable water quality standards.

(f) Each outfall or internal NPDES permit compliance point from which process wastewaters are discharged must have specific, fixed effluent limitations for each pollutant limited by the applicable subparts A through G of this part.

(g) Subcategory-Specific Restrictions:

(1) There shall be no alternate effluent limitations for cokemaking process wastewater unless the alternative limitations are more stringent than the limitations in subpart A of this part;

(2) There shall be no alternate effluent limitations for sintering process wastewater unless the alternative limitations are more stringent than the sintering process wastewater limitations in subpart B of this part.

(h) The water bubble may be used to calculate alternative effluent limitations only for identical pollutants (*e.g.,* lead for lead, not lead for zinc).

§ 420.5 Pretreatment standards compliance dates.

Compliance with the pretreatment standards for existing sources set forth in this part is required not later than three years from date of publication of the final rule whether or not the pretreatment authority issues or amends a pretreatment permit requiring such compliance. Until that date, the pretreatment standards for existing sources set forth in the 2000 version of this part shall continue to apply.

§ 420.6 Effluent limitations guidelines and standards for pH.

(a) The pH level shall be maintained between 6.0 and 9.0 su at all times.

(b) The pH level in process wastewaters subject to a subpart within this part shall be monitored at the point of discharge to the receiving water or at the point at which the wastewater leaves the wastewater treatment facility operated to treated effluent subject to that subpart.

§ 420.7 Supplemental NPDES permit application and pretreatment report requirements.

In addition to the information and data for NPDES permit applications and pretreatment reports required by part 122, subpart B and § 403.12, respectively, the permit applicant shall provide the following information with its permit application or pretreatment report:

(a) Complete applications for any new variances or for renewal of any existing variances from the generally applicable effluent limitations;

(b) Any proposed alternative effluent limitations under the ''water bubble'' rule at § 420.4.

Subpart A—Cokemaking Subcategory

§ 420.10 Applicability.

The provisions of this subpart are applicable to discharges and the introduction of pollutants into publicly owned treatment works resulting from by-product and other cokemaking operations.

§ 420.11 Subcategory definitions.

As used in this subpart:

(a) *Product* means the average daily operating (production) rate of metallurgical coke plus coke breeze determined in accordance with § 420.3.

(b) *By-product cokemaking* means operations in which coal is heated in the absence of air to produce metallurgical coke (furnace coke and foundry coke) and recovery of by-products derived from the gases and liquids which are driven from the coal during cokemaking.

(c) *Cokemaking, non-recovery* means cokemaking operations for production of metallurgical coke (furnace coke and foundry coke) without recovery of by-products.

(d) *Coke* means a processed form of coal which serves as the basic fuel for the smelting of iron ore.

(1) *Foundry coke* means coke produced for foundry operations.

(2) *Furnace coke* means coke produced for blast furnace operations.

(e) *Iron and steel coke plant* means by-product cokemaking operations which provide more than fifty per cent of the coke produced to ironmaking blast furnaces associated with steel production.

(f) *Merchant coke plant* means by-product cokemaking operations other than those at iron and steel coke plants.

(g) *Merchant bar* means rounds, flats, angles, squares and channels that are used by fabricators to manufacture a wide variety of products such as furniture, stair railings and farm equipment.

(h) *Wet desulfurization system* means one that utilizes water to remove (scrub) sulfur compounds from coke oven off-gases.

(i) *NESHAPs* means National Emission Standards for Hazardous Air Pollutants applicable to by-product coke plants.

§ 420.12 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

(a) *By-product cokemaking.* Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this segment must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent Limitations (BPT)

Process wastewater source	Maximum daily [3]	Maximum monthly avg.[3]
(1) Iron and steel coke plants [1]		
Oil & grease	0.0654	0.0218
TSS	0.506	0.262
(2) Merchant coke plants [2]		
Oil & grease	0.0698	0.0232
TSS	0.540	0.280

[1] iron and steel coke plants, increased loadings, not to exceed 11 per cent of the above limitations, shall be provided for process wastewaters from wet desulfurization systems, but only to the extent such systems generate process wastewaters.

[2] merchant coke plants, increased loadings, not to exceed 10 per cent of the above limitations, shall be provided for process wastewaters from wet desulfurization systems, but only to the extent such systems generate process wastewaters. [3] Pounds per ton of product.

(b) *Cokemaking—non-recovery.* Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this segment must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process wastewater pollutants to waters of the U.S.

§ 420.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in 40 CFR 401.16) in § 420.12 for the best practicable control technology currently available (BPT).

§ 420.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).

(a) *By-product cokemaking.* Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT):

EFFLUENT LIMITATIONS (BAT)

Regulated parameter	Maximum daily[1]	Maximum monthly avg.[1]
Ammonia (as N)	0.00137	0.000618
Benzo(a)pyrene	0.0000909	0.0000304
Cyanide	0.0104	0.00394
Mercury	0.000000864	0.000000523
Naphthalene	0.000103	0.0000345
Phenol	0.0000332	0.0000187
Selenium	0.000185	0.000159
Thiocyanate	0.00164	0.00115
TRC	0.000659	

[1]Pounds per ton of product.

(1) Increased loadings, not to exceed 9.5 per cent of the above limitations, shall be provided for process wastewaters from wet desulfurization systems, but only to the extent such systems generate process wastewaters.

(2) Increased loadings, not to exceed 6.3 per cent of the above limitations, shall be provided for process wastewaters generated as a result of control measures necessary for compliance with by-product coke plant NESHAPs, but only to the extent such systems generate process wastewaters.

(3) Increased loadings shall be provided for process wastewaters from other wet air pollution control systems (except those from coal charging and coke pushing emission controls), coal tar processing operations and coke plant groundwater remediation systems, but only to the extent such systems generate process wastewaters and those wastewaters are co-treated with process wastewaters from by-product cokemaking wastewaters.

(4) The effluent limitations for TRC shall be applicable only when chlorination of cokemaking wastewaters is practiced.

(b) *Cokemaking—non-recovery.* Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants to waters of the U.S.

§ 420.15 New source performance standards (NSPS).

New sources subject to this subpart must achieve the following new source performance standards (NSPS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after [insert date 10 years prior to the date that is 60 days after the publication date of the final rule] and before [insert date that is 60 days after the publication date of the final rule] must continue to achieve the standards specified in the 2000 version of § 420.14. toxic and nonconventional pollutants, those standards shall not apply after the expiration of the applicable time period specified in 40 CFR 122.29(d)(1); thereafter, the source must achieve the standards specified in § 420.14.

(b) *By-product cokemaking.* The following standards apply with respect to each new source that commences construction after [insert date that is 60 days after the publication date of the final rule:

EFFLUENT LIMITATIONS (BAT)

Regulated parameter	Maximum daily[1]	Maximum monthly avg.[1]
Ammonia (as N)	0.00137	0.000618
Benzo(a)pyrene	0.0000909	0.0000304
Cyanide	0.0104	0.00394
Mercury	0.000000864	0.000000523
Naphthalene	0.000103	0.0000345
Oil & grease	0.0246	0.0132

EFFLUENT LIMITATIONS (BAT)—Continued

Regulated parameter	Maximum daily[1]	Maximum monthly avg.[1]
Phenol	0.0000332	0.0000187
Selenium	0.000185	0.000159
Thiocyanate	0.00164	0.00115
TRC	0.000659	
TSS	0.0665	0.0337

[1]Pounds per ton of product.

(1) Increased loadings, not to exceed 9.5 per cent of the above limitations, shall be provided for process wastewaters from wet desulfurization systems, but only to the extent such systems generate process wastewaters.

(2) Increased loadings, not to exceed 6.3 per cent of the above limitations, shall be provided for process wastewaters generated as a result of control measures necessary for compliance with by-product coke plant NESHAPs, but only to the extent such systems generate process wastewaters.

(3) Increased loadings shall be provided for process wastewaters from other wet air pollution control systems (except those from coal charging and coke pushing emission controls), coal tar processing operations and coke plant groundwater remediation systems, but only to the extent such systems generate process wastewaters and those wastewaters are co-treated with process wastewaters from by-product cokemaking wastewaters.

(4) The effluent limitations for TRC shall be applicable only when chlorination of cokemaking wastewaters is practiced.

(c) *Cokemaking—non-recovery.* There shall be no discharge of process wasterwater pollutants to waters of the U.S.

§ 420.16 Pretreatment standards for existing sources (PSES).

Option 1 for paragraph (a): (a) *By-product cokemaking.* Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart must achieve the following pretreatment standards for existing sources (PSES):

PHYSICAL CHEMICAL TREATMENT

[Pretreatment Standards (PSES)]

Regulated parameter	Maximum daily[1]	Maximum monthly avg.[1]
Ammonia (as N)	0.0845	0.0559
Cyanide	0.0244	0.0128
Naphthalene	0.00268	0.000869
Phenol	2.13	0.720
Selenium	0.00125	0.00104
Thiocyanate	0.402	0.317

[1] Pounds per ton of product.

(1) Increased loadings, not to exceed 13.9 per cent of the above limitations, shall be provided for process wastewaters from wet desulfurization systems, but only to the extent such systems generate process wastewaters.

(2) Increased loadings, not to exceed 9.3 per cent of the above limitations, shall be provided for process wastewaters generated as a result of control measures necessary for compliance with by-product coke plant NESHAPs, but only to the extent such systems generate process wastewaters.

(3) Increased loadings shall be provided for process wastwaters from other wet air pollution control systems (except those from coal charging and coke pushing emission controls), coal tar processing operations and coke plant groundwater remediation systems, but only to the extent such systems generate process wastewaters and those wastewaters are co-treated with process wastewaters from by-product cokemaking wastewaters.

Option 2 for paragraph (a): (a) *By-product cokemaking.* Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart must achieve the following pretreatment standards for existing sources (PSES):

PHYSICAL CHEMICAL PLUS BIOLOGICAL TREATMENT

[Pretreatment Standards (PSES)]

Regulated parameter	Maximum daily[1]	Maximum monthly avg.[1]
Ammonia (as N)	0.00539	0.00357
Cyanide	0.00616	0.00422
Naphthalene	0.000103	0.0000345
Phenol	0.0000332	0.0000187
Selenium	0.000185	0.000159
Thiocyanate	0.00164	0.00115

[1] Pounds per ton of product.

(1) Increased loadings, not to exceed 9.5 percent of the above limitations, shall be provided for process wastewaters from wet desulfurization systems, but only to the extent such systems generate process wastewaters.

(2) Increased loadings, not to exceed 6.3 percent of the above limitations, shall be provided for process wastewaters generated as a result of control measures necessary for compliance with by-product coke plant NESHAPs, but only to the extent such systems generate process wastewaters.

(3) Increased loadings shall be provided for process wastewaters from other wet air pollution control systems (except those from coal charging and coke pushing emission controls), coal tar processing operations and coke plant groundwater remediation systems, but only to the extent such systems generate process wastewaters and those wastewaters are co-treated with process wastewaters from by-product cokemaking wastewaters.

(b) *Cokemaking-non-recovery.* There shall be no discharge of process wastewater pollutants to POTWs.

§ 420.17 Pretreatment standards for new sources (PSNS).

New sources subject to this subpart must achieve the following pretreatment standards for new sources (PSNS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after [insert date 10 years prior to the date that is 60 days after the publication date of the final rule] and before [insert date that is 60 days after the publication date of the final rule] must continue to achieve the standards specified in the 2000 version of § 420.16 for ten years beginning on the date the source commenced discharge or during the period of depreciation or amortization of the facility, whichever comes first, after which the source must achieve the standards specified in § 420.16.

(b) *By-product cokemaking.* Except as provided in 40 CFR 403.7, the following standards apply with respect to each new source that commences discharge after [insert date that is 60 days after the publication date of the final rule]:

PHYSICAL CHEMICAL PLUS BIOLOGICAL TREATMENT

[Pretreatment Standards (PSNS)]

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N)	0.00539	0.00357
Cyanide	0.00616	0.00422
Naphthalene	0.000103	0.0000345
Phenol	0.0000332	0.0000187
Selenium	0.000185	0.000159
Thiocyanate	0.00164	0.00115

[1] Pounds per ton of product.

(1) Increased loadings, not to exceed 9.5 percent of the above limitations, shall be provided for process wastewaters from wet desulfurization systems, but only to the extent such systems generate process wastewaters.

(2) Increased loadings, not to exceed 6.3 percent of the above limitations, shall be provided for process wastewaters generated as a result of control measures necessary for compliance with by-product coke plant NESHAPs, but only to the extent such systems generate process wastewaters.

(3) Increased loadings shall be provided for process wastewaters from other wet air pollution control systems (except those from coal charging and coke pushing emission controls), coal tar processing operations and coke plant groundwater remediation systems, but only to the extent such systems generate process wastewaters and those wastewaters are co-treated with process wastewaters from by-product cokemaking wastewaters.

(c) *Cokemaking—non-recovery.* There shall be no discharge of process wastewater pollutants to POTWs.

Subpart B—Ironmaking Subcategory

§ 420.20 Applicability.

The provisions of this subpart are applicable to discharges and the introduction of pollutants into publicly owned treatment works resulting from: Sintering operations conducted by heating in a traveling grate combustion system of iron bearing materials (*e.g.,* iron ore, mill scale, blast furnace flue dusts, blast furnace wastewater treatment sludges), limestone, coke fines and other materials to produce an agglomerate for charging to the blast furnace; and, ironmaking operations in which iron ore and other iron-bearing materials are reduced to molten iron in a blast furnace.

§ 420.21 Subcategory definitions.

As used in this subpart:

(a) *Product* means:

(1) Sinter agglomerated from iron-bearing materials; or

(2) Molten iron produced in a blast furnace, and does not include slag skimmed remotely from the blast furnace.

The average daily operating (production) rate of sinter and molten iron must be determined in accordance with § 420.3.

(b) *Dry-air pollution control system* is an emission control system that utilizes filters to remove iron-bearing particles (fines) from blast furnace or sintering off-gases.

(c) *Minimum level (ML)* means the level at which the analytical system gives recognizable signals and an acceptable calibration point. 2,3,7,8-tetrachlorodibenzofuran, the minimum level is 10 pg/L per EPA Method 1613B for water and wastewater samples.

(d) *Pg/L* means picograms per liter (ppt = 1.0×10^{-12} gm/L).

(e) *Sintering* means a process for agglomerating iron-bearing materials into small pellets (sinter) which can be charged to a blast furnace.

(f) *Wet-air pollution control system* is an emission control system that utilizes a water mist to clean process or furnace off-gases.

§ 420.22 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve, for each applicable operation, the following effluent limitations representing the degree of effluent reduction attainable by the application

of the best practicable control technology currently available (BPT):

EFFLUENT LIMITATIONS (BPT)

Process wastewater source	Maximum daily [1]	Maximum monthly avg [1]
(a) Sintering operations with wet air pollution controls:		
Oil & grease	0.0300	0.0100
TSS	0.150	0.050
(b) Blast furnaces:		
Oil & grease		
TSS	0.156	0.0520
(c) Sintering operations with dry air pollution controls	([2])	([2])

[1] Pounds per ton of product.
[2] There shall be no discharge of process wastewater pollutants to waters of the U.S. for sintering operations with dry air pollution controls.

§ 420.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in 40 CFR 401.16) in § 420.22 of this subpart for the best practicable control technology currently available (BPT).

§ 420.24 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).

(a) *Sintering operations with wet air pollution control system.* The following table is effluent limitations (BAT) for sintering operations with wet air pollution control system:

EFFLUENT LIMITATIONS (BAT)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N)	0.000652	0.000293
Cyanide	0.00493	0.00187
Lead	0.0000913	0.0000476
Phenol	0.0000463	0.0000157
2,3,7,8–TCDF	[3]<ML	
TRC [2]	0.000313	
Zinc	0.000116	0.0000457

[1] Pounds per ton of product.
[2] Applicable only when sintering process wastewater is chlorinated.
[3] Ten parts per quadrillion (10×10^{-12} g/l).

(b) *Sintering operations with dry air pollution control system.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

(c) *Blast furnaces.* The following table is effluent limitations (BAT) for blast furnaces:

EFFLUENT LIMITATIONS (BAT)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N)	0.000217	0.0000977
Cyanide	0.00164	0.000623
Lead	0.0000304	0.0000159
Phenol	0.0000154	0.00000523
2,3,7,8-TCDF [3]	[4]<ML	
TRC [2]	0.000104	
Zinc	0.0000387	0.0000152

[1] Pounds per ton of product.
[2] Applicable only when blast furnace process wastewater is chlorinated.
[3] Applicable only when process wastewaters from blast furnaces and sintering operations are co-treated.
[4] Ten parts per quadrillion (10×10^{-12} g/l).

§ 420.25 New Source Performance Standards (NSPS).

New sources subject to this subpart must achieve the following new source performance standards (NSPS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after *[insert date 10 years prior to the date that is 60 days after the publication date of the final rule]* and before *[insert date that is 60 days after the publication date of the final rule]* must continue to achieve the applicable standards specified in the 2000 version of §§ 420.24 and 420.34. toxic and nonconventional pollutants, those standards shall not apply after the expiration of the applicable time period specified in 40 CFR 122.29(d)(1); thereafter, the source must achieve the applicable standards specified in § 420.24.

(b) The following standards apply with respect to each new source that commences construction after *[insert date that is 60 days after the publication date of the final rule].*

(1) *Sintering operations with wet air pollution control system.* The following table is Performance Standards (NSPS) for sintering operations with wet air pollution control system:

PERFORMANCE STANDARDS (NSPS)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N)	0.000652	0.000293
Cyanide	0.00493	0.00187
Lead	0.0000913	0.0000476
Oil & grease	0.00531	0.00420
Phenol	0.0000463	0.0000157
2,3,7,8-TCDF	[3] <ML	
TRC [2]	0.000313	
TSS	0.0251	0.00939
Zinc	0.000116	0.0000457

[1] Pounds per ton of product.
[2] Applicable only when sintering process wastewater is chlorinated.
[3] Ten parts per quadrillion (10×10^{-2} g/l).

(2) *Sintering operations with dry air pollution control system.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

(3) *Blast furnaces.* The following table is Performance Standards (NSPS) for blast furnaces:

PERFORMANCE STANDARDS (NSPS)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N)	0.000217	0.0000977
Cyanide	0.00164	0.000623
Lead	0.0000304	0.0000159
Oil & grease	0.00177	0.00140
Phenol	0.0000154	0.00000523
2,3,7,8-TCDF[3]	[4] <ML	
TRC [2]	0.000104	
TSS	0.00836	0.00313
Zinc	0.0000387	0.0000152

[1] Pounds per ton of product.
[2] Applicable only when blast furnace process wastewater is chlorinated.
[3] Applicable only when process wastewaters from blast furnaces and sintering operations are co-treated.
[4] Ten parts per quadrillion (10×10^{-12} g/l).

§ 420.26 Pretreatment Standards for Existing Sources (PSES).

Except as provided in 40 CFR 403.7, any existing source subject to this subpart must achieve the following pretreatment standards for existing sources (PSES):

(a) *Sintering operations with wet air pollution control system.* The following table is Pretreatment Standards (PSES) for sintering operations with wet air pollution control system:

PRETREATMENT STANDARDS (PSES)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N) [2]	0.000652	0.000293
Lead	0.0000913	0.0000476
2,3,7,8-TCDF	[3] <ML	
Zinc	0.000116	0.0000457

[1] Pounds per ton of product.

[2] Not applicable when the facilities discharge to POTWs with the capability, when considered together with the indirect discharger's removals, to achieve removals at least equivalent to those expected under BAT.
[3] Ten parts per quadrillion (10 x 10^{-12} g/l).

(b) *Sintering operations with dry air pollution control system.* There shall be no discharge of process wastewater pollutants to POTWs.

(c) *Blast furnaces.* The following table is Pretreatment Standards (PSES) for blast furnaces:

PRETREATMENT STANDARDS (PSES)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N) [2]	0.000217	0.0000977
Lead	0.0000304	0.0000159
2,3,7,8–TCDF [3]	[4] <ML	
Zinc	0.0000387	0.0000152

[1] Pounds per ton of product.
[2] Not applicable when the facilities discharge to POTWs with the capability, when considered together with the indirect discharger's removals, to achieve removals at least equivalent to those expected under BAT.
[3] Applicable only when process wastewater from blast furnaces and sintering operations are co-treated.
[4] Ten parts per quadrillion (10 x 10^{12} g/l).

§ 420.27 Pretreatment standards for new sources (PSNS).

New sources subject to this subpart must achieve the following pretreatment standards for new sources (PSNS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after *[insert date 10 years prior to the date that is 60 days after the publication date of the final rule]* and before *[insert date that is 60 days after the publication date of the final rule]* must continue to achieve the standards specified in the 2000 version of § 420.26 for ten years beginning on the date the source commenced discharge or during the period of depreciation or amortization of the facility, whichever comes first, after which the source must achieve the standards specified in § 420.26.

(b) Except as provided in 40 CFR 403.7, the following standards apply with respect to each new source that commences construction after *[insert date that is 60 days after the publication date of the final rule]*:

(1) *sintering operations with wet air pollution control system.* The following table is Pretreatment Standards (PSNS) for sintering operations with wet air pollution control system:

PRETREATMENT STANDARDS (PSNS)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N) [2]	0.000652	0.000293
Lead	0.0000913	0.0000476
2,3,7,8-TCDF	[3] <ML	
Zinc	0.000116	0.0000457

[1] Pounds per ton of product.
[2] Not applicable when the facilities discharge to POTWs with the capability, when considered together with the indirect discharger's removals, to achieve removals at least equivalent to those expected under BAT.
[3] Ten parts per quadrillion (10 x 10^{12} g/l).

(2) *Sintering operations with dry air pollution control system.* There shall be no discharge of process wastewater pollutants to POTWs.

(3) *Blast furnaces:* The following table is Pretreatment Standards (PSNS) for blast furnaces:

PRETREATMENT STANDARDS (PSNS)

Regulated parameter	Maximum daily [1]	Maximum monthly avg.[1]
Ammonia (as N) [2]	0.000217	0.0000977
Lead	0.0000304	0.0000159
2,3,7,8-TCDF [3]	[4] <ML	
Zinc	0.0000387	0.0000152

[1] Pounds per ton of product.
[2] Not applicable when the facilities discharge to POTWs with the capability, when considered together with the indirect discharger's removals, to achieve removals at least equivalent to those expected under BAT.
[3] Applicable only when process wastewater from blast furnaces and sintering operations are co-treated.
[4] Ten parts per quadrillion (10 x 10^{12} g/l).

§ 420.28 Point of compliance monitoring.

(a) *Sinter Direct Dischargers.* Pursuant to 40 CFR 122.44(i) and 122.45(h), a direct discharger must demonstrate compliance with the effluent limitations and standards for 2,3,7,8-TCDF at the point after treatment of sinter plant wastewater separately or in combination with blast furnace wastewater, but prior to mixing with any other process or non-process wastewaters or non-contact cooling waters.

(b) *Sinter Indirect Dischargers.* An indirect discharger must demonstrate compliance with the pretreatment standards for 2,3,7,8=TCDF by monitoring at the point after treatment of sinter plant wastewater separately or in combination with blast furnace wastewater, but prior to mixing with any other process or non-process wastewaters or non-contact cooling waters.

Subpart C—Integrated Steelmaking Subcategory

§ 420.30 Applicability.

The provisions of this subpart are applicable to discharges and the introduction of pollutants into publicly owned treatment works resulting from steelmaking operations conducted at integrated steel mills. Such operations include steelmaking in basic oxygen furnaces and vacuum degassing and continuous casting of molten steels. The provisions of this subpart are also applicable to steelmaking in basic oxygen furnaces conducted at any location.

§ 420.31 Subcategory definitions.

As used in this subpart:

(a) *Product* means steel produced in a basic oxygen furnace (BOF) from molten iron, steel scrap, fluxes and alloying elements in various combinations by adding oxygen (air), before further processing in ladle metallurgy stations or casting operations. The average daily operating (production) rates shall be determined in accordance with § 420.3, except as noted in paragraph (b) of this section.

(b) *Average hourly operating rate and average daily operating rate* for vacuum degassing operations must be determined in accordance with the methods set out in § 420.3 for the week with the highest vacuum degassing production during the year with the highest annual production from the past five years.

(c) *Basic furnace* means one in which the brick lining is composed of refractory material derived from dolomite (CaO and MgO), limestone (CaO), or magnesite (MgO).

(d) *Semi-wet-air* means an emission control system in which water is added for the purpose of conditioning the temperature and/or the humidity of furnace or process off-gases prior to cleaning the gases in a dry-air emission control system.

(e) *Wet-air open combustion* means an emission control system which has been designed to add excess air to furnace or process off-gases so as to assure a more complete combustion (conversion) of carbon monoxide to carbon dioxide.

(f) *Wet-air suppressed combustion* means an emission control system which has been designed to restrict the amount of air available to furnace or process off-gases so as to assure minimal combustion (conversion) of carbon monoxide to carbon dioxide.

§ 420.32 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve, for each applicable operation, the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

EFFLUENT LIMITATIONS (BPT)

Process wastewater source	Maximum daily [1]	Maximum monthly Avg. [1]
(a) Basic oxygen furnaces:		
(1) semi-wet air pollution controls:	([3])	
Oil & grease		
TSS		
(2) wet-open combustion:		
Oil & grease		
TSS	0.137	0.0458
(3) wet-suppressed combustion:		
Oil & grease		
TSS	0.0624	0.0208
(b) Vacuum degassing:		
Oil & grease		
TSS	0.0312	0.0104
(c) Continuous casting:		
Oil & grease	0.0468	0.0156
TSS	0.156	0.052
(d) Ladle metallurgy	([2])	([2])

[1] Pounds per ton of product.
[2] There shall be no discharge of process wastewater pollutants to waters of the U.S. for ladle metallurgy.
[3] 1982 regulation allowed for no discharge of process wastewater from this operation.

§ 420.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in 40 CFR 401.16) in § 420.32 for the best practicable control technology currently available (BPT).

§ 420.34 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point

source subject to this subpart must achieve, for each applicable operation, the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT):

(a) *Basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; continuous casting.* This table is Effluent Limitations (BAT) for basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; and continuous casting:

EFFLUENT LIMITATIONS (BAT)

Process wastewater source	Maximum daily [1]	Maximum monthly avg. [1]
(1) Basic oxygen furnaces:		
(i) semi-wet air pollution controls:		
(A) Lead	0.0000122	0.00000634
(B) Zinc	0.0000140	0.00000795
(ii) wet-suppressed combustion:		
(A) Lead	0.0000243	0.0000127
(B) Zinc	0.0000279	0.0000159
(2) Vacuum degassing:		
(i) Lead	0.0000183	0.00000951
(ii) Zinc	0.0000209	0.0000119
(3) Continuous casting:		
(i) Lead	0.0000243	0.0000127
(ii) Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(b) *Basic oxygen furnaces with wet-open combustion air pollution control system.* The following table is Effluent Limitations (BAT) for basic oxygen furnaces with wet-open combustion air pollution control system:

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.0000243	0.0000127
Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(c) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

§ 420.35 New Source Performance Standards (NSPS).

New sources subject to this subpart must achieve the following new source performance standards (NSPS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after *[insert date 10 years prior to the date that is 60 days after the publication date of the final rule]* and before *[insert date that is 60 days after the publication date of the final rule]* must continue to achieve the applicable standards specified in the 2000 version of §§ 420.44, 420.54 and 420.64. toxic and nonconventional pollutants, those standards shall not apply after the expiration of the applicable time period specified in 40 CFR 122.29(d)(1); thereafter, the source must achieve the applicable standards specified in § 420.34.

(b) The following standards apply with respect to each new source that commences construction after *[insert date that is 60 days after the publication date of the final rule].*

(1) *Basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; continuous casting.* The following table is Performance Standards (NSPS) for basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; and continuous casting:

PERFORMANCE STANDARDS (NSPS)

Process wastewater source	Maximum daily [1]	Maximum monthly avg.[1]
(i) Basic oxygen furnaces:		
(A) semi-wet air pollution controls:		
(*1*) Lead	0.0000122	0.00000634
(*2*) Zinc	0.0000140	0.00000795
(ii) wet-suppressed combustion:		
(A) Lead	0.0000243	0.0000127
(B) Zinc	0.0000279	0.0000159
(ii) Vacuum degassing		
(A) Lead	0.0000183	0.00000951

PERFORMANCE STANDARDS (NSPS)—Continued

Process wastewater source	Maximum daily [1]	Maximum monthly avg.[1]
(B) Zinc	0.0000209	0.0000119
(iii) Continuous casting		
(A) Lead	0.0000243	0.0000127
(B) Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(2) *Basic oxygen furnaces with wet-open combustion air pollution control system.* The following table is Performance Standards (NSPS) for basic oxygen furnaces with wet-open combustion air pollution control system:

PERFORMANCE STANDARDS (NSPS)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.0000243	0.0000127
Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(3) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

§ 420.36 Pretreatment Standards for Existing Sources (PSES).

Except as provided in 40 CFR 403.7, any existing source subject to this subpart must achieve the following pretreatment standards for existing sources (PSES):

(a) *Basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; continuous casting.* The following table is Pretreatment Standards (PSES) for basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; and continuous casting:

PRETREATMENT STANDARDS (PSES)

Process Wastewater Source	Maximum daily [1]	Maximum monthly avg.[1]
(1) Basic oxygen furnaces:		
(i) semi-wet air pollution controls		
(A) Lead	0.0000122	0.00000634
(B) Zinc	0.0000140	0.00000795
(ii) wet-suppressed combustion		
(A) Lead	0.0000243	0.0000127
(B) Zinc	0.0000279	0.0000159
(2) Vacuum degassing:		
(i) Lead	0.0000183	0.00000951
(ii) Zinc	0.0000209	0.0000119
(3) Continuous casting:		
(i) Lead	0.0000243	0.0000127
(ii) Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(b) *Basic oxygen furnaces with wet-open combustion air pollution control system.* The following table is Pretreatment Standards (PSES) for basic oxygen furnaces with wet-open combustion air pollution control system:

PRETREATMENT STANDARDS (PSES)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.0000243	0.0000127
Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(c) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to POTWs.

§ 420.37 Pretreatment Standards for New Sources (PSNS).

New sources subject to this subpart must achieve the following pretreatment standards for new sources (PSNS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after *[insert date 10 years prior to the date that is 60 days after the publication date of the final rule]* and before *[insert date that is 60 days after the publication date of the final rule]* must continue to achieve the standards specified in the 2000 version of §§ 420.46, 420.56, and 420.66 for ten years beginning on the date the source commenced discharge or during the period of depreciation or amortization of the facility, whichever comes first, after which the source must achieve the standards specified in § 420.36.

(b) Except as provided in 40 CFR 403.7, the following standards apply with respect to each new source that commences construction after *[insert date that is 60 days after the publication date of the final rule]*:

(1) *Basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; continuous casting.* The following table is Pretreatment Standards (PSNS) for basic oxygen furnaces with semi-wet air pollution control system; basic oxygen furnaces with wet-suppressed combustion air pollution control system; vacuum degassing; and continuous casting:

PRETREATMENT STANDARDS (PSNS)

Process wastewater source	Maximum daily [1]	Maximum monthly avg.[1]
(i) Basic oxygen furnaces:		
(A) semi-wet air pollution controls:		
(1) Lead	0.0000122	0.00000634
(2) Zinc	0.0000140	0.00000795
(B) wet-suppressed combustion:		
(1) Lead	0.0000243	0.0000127
(2) Zinc	0.0000279	0.0000159
(ii) Vacuum degassing:		
(A) Lead	0.0000183	0.00000951
(B) Zinc	0.0000209	0.0000119
(iii) Continuous casting:		
(A) Lead	0.0000243	0.0000127
(B) Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(2) *Basic oxygen furnaces with wet-open combustion air pollution control system.* The following table is Pretreatment Standards (PSNS) basic oxygen furnaces with wet-open combustion air pollution control system:

PRETREATMENT STANDARDS (PSNS)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.0000243	0.0000127
Zinc	0.0000279	0.0000159

[1] Pounds per ton of product.

(3) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to POTWs.

Subpart D—Integrated and Stand-Alone Hot ming Subcategory

§ 420.40 Applicability.

The provisions of this subpart are applicable to discharges and the introduction of pollutants into publicly owned treatment works resulting from primary, section, flat and pipe and tube hot forming operations conducted at integrated steel mills and at stand-alone hot forming mills.

§ 420.41 Subcategory definitions.

As used in this subpart:

(a) *Product* means the solid, flat-rolled steel, steel shapes or pipe and tube produced at primary, section, flat, pipe and tube hot-forming mills. The average daily operating (production) rate shall be determined in accordance with § 420.3.

(b) *Hot forming* means those steel processing operations in which solidified, heated steel is shaped by mechanical pressure applied through one or a series of rolls.

(c) *Primary mill* means the first hot forming operation performed on solidified steel after the steel is removed from ingot molds in which steel ingots are reduced to blooms or slabs by passing the heated steel between rotating steel rolls.

(d) *Section mill* means those steel hot forming operations that produce a variety of steel shapes other than those produced on primary mills, flat mills or pipe and tube mills.

(e) *Flat mill* means those steel hot forming operations that reduce heated slabs to plates, strip and sheet or skelp.

(f) *Pipe and tube mill* means steel hot forming operations that produce butt-welded or seamless tubular steel products.

(g) *Scarfing* means steel surface conditioning operations in which flames generated by combustion of oxygen and fuel are used to remove surface metal imperfections from blooms, billets or slabs.

(h) *Plate mill* means steel hot forming operations that produce flat, hot-rolled

products that are: Between 8 and 48 inches wide and over 0.23 inches thick; or greater than 48 inches wide and over 0.18 inches thick.

(i) *Hot strip and sheet mill* means operations that produce flat, hot rolled steel products other than plates.

(j) *Carbon steel hot-forming* means operations that produce a majority (tonnage basis) of carbon steels by hot forming.

(k) *Specialty steel hot-forming* means operations that produce less than a majority (tonnage basis) of carbon steel by hot forming.

(l) *Carbon and alloy steel* means operations that produce a majority (tonnage basis) of carbon and alloy steel products by hot forming.

(m) *Stainless steels* means operations that produce a majority (tonnage basis) of stainless steel products by hot forming.

(n) *Skep* means flat, hot-rolled steel strip or sheet used to form welded pipe or tube products.

§ 420.42 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve, for each applicable operation, the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

EFFLUENT LIMITATIONS (BPT)

Process wastewater source	Maximum daily [1]	Maximum monthly Avg.[1]
(a) Primary mills, carbon and specialty:		
(1) without scarfing:		
(i) Oil & grease	0.0748	
(ii) TSS	0.300	0.112
(2) with scarfing:		
(i) Oil & grease:	0.442	
(ii) TSS	0.111	0.166
(b) Section mills:		
(1) carbon:		
(i) Oil & grease	0.179	
(ii) TSS	0.714	0.268
(2) Specialty:		
(i) Oil & grease	0.112	
(ii) TSS	0.448	0.128
(c) Flat mills:		
(1) Hot strip and sheet, carbon and specialty:		
(i) Oil & grease	0.214	
(ii) TSS	0.854	0.320
(2) Plate mills, carbon:		
(i) Oil & grease	0.114	
(ii) TSS	0.454	0.170
(3) Plate mills, specialty:		
(i) Oil & grease	0.0500	
(ii) TSS	0.200	0.0752
(d) Pipe and tube mills, carbon and specialty:		
(i) Oil & grease	0.106	
(2) TSS	0.424	0.159

[1] Pounds per ton of product.

§ 420.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in 40 CFR 401.16) in § 420.42 of this subpart for the best practicable control technology currently available (BPT).

§ 420.44 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT):

(a) *Carbon and Alloy Steels.* The following table is Effluent Limitations (BAT) for carbon and alloy steels:

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.000122	0.0000634
Zinc	0.000131	0.0000907

[1] Pounds per ton of product.

(b) *Stainless Steels.* The following table is Effluent Limitations (BAT) for stainless steels:

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
Chromium	0.0000808	0.0000362
Nickel	0.000275	0.000144

[1] Pounds per ton of product.

§ 420.45 New Source Performance Standards (NSPS).

New sources subject to this subpart must achieve the following new source performance standards (NSPS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after *[insert date 10 years prior to the date that is 60 days after the publication date of the final rule]* and before *[insert date that is 60 days after the publication date of the final rule]* must continue to achieve the applicable standards specified in the 2000 version of §§ 420.44, 420.54, 420.64, and 420.74. toxic and nonconventional pollutants, those standards shall not apply after the expiration of the applicable time period specified in 40 CFR 122.29(d)(1); thereafter, the source must achieve the applicable standards specified in § 420.44.

(b) The following standards apply with respect to each new source that commences construction after *[insert date that is 60 days after the publication date of the final rule].*

(1) *Carbon and Alloy Steels.* The following table is Performance Standards (NSPS) for carbon and alloy steels:

PERFORMANCE STANDARDS (NSPS)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.000122	0.0000634
Oil & grease	0.00793	0.00628
TSS	0.0182	0.0124
Zinc	0.000131	0.0000907

[1] Pounds per ton of product.

(2) *Stainless Steels.* The following table is Performance Standards (NSPS) for stainless steels:

PERFORMANCE STANDARDS (NSPS)

	Maximum daily [1]	Maximum monthly avg.[1]
Chromium	0.0000808	0.0000362
Nickel	0.000275	0.000144
Oil & grease	0.0236	0.0119
TSS	0.0265	0.0109

[1] Pounds per ton of product.

§ 420.46 Pretreatment Standards for Existing Sources (PSES).

Except as provided in 40 CFR 403.7, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§ 420.47 Pretreatment Standards for New Sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart E—Non-Integrated Steelmaking and Hot ming Subcategory

§ 420.50 Applicability.

The provisions of this subpart are applicable to discharges and the introduction of pollutants into publicly owned treatment works resulting from steelmaking and hot forming operations conducted at non-integrated steel mills. Such operations include steelmaking in electric arc furnaces; vacuum degassing and continuous casting of molten steels; and, hot forming of flat-rolled steels, steel shapes and pipe and tube. The provisions of this subpart are also applicable to steelmaking operations in electric arc furnaces and related vacuum degassing, continuous casting and hot forming operations conducted at any location.

§ 420.51 Subcategory definitions.

As used in this subpart:

(a) *Product* means:

(1) Steel produced in electric furnaces before further processing in ladle metallurgy stations or casting operations;

(2) Flat-rolled steel, steel shapes or pipe and tube produced by hot-forming operations. The daily operating

(production) rate shall be determined in accordance with § 420.3.

(b) Except for the term ''product,'' definitions set out for subpart C of this part are applicable to this subpart.

(c) *Electric arc furnace* means one in which the heat is supplied by an electric arc from graphite electrodes to the molten metal bath. The charge is generally 100% scrap metal.

§ 420.52 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve, for each applicable operation, the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

EFFLUENT LIMITATIONS (BPT)

Process wastewater source	Maximum daily [1]	Maximum monthly avg.[1]
(a) Electric arc furnaces	([2])	([2])
(b) Vacuum degassing:		
(1) Oil & grease		
(2) TSS	0.0312	0.0104
(c) Continuous casting:		
(1) Oil & grease	0.0468	0.0156
(2) TSS	0.156	0.052
(d) Hot forming mills:		
(1) Oil & grease	0.0748	
(2) TSS	0.300	0.112
(e) Ladle metallurgy	([2])	([2])

[1] Pounds per ton of product.
[2] There shall be no discharge of process wastewater pollutants to waters of the U.S. for electric arc furnaces or ladle metallurgy.

§ 420.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in 40 CFR 401.16) in § 420.52 of this subpart for the best practicable control technology currently available (BPT).

§ 420.54 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).

(a) *Carbon and Alloy Steels.* The following effluent limitations apply to discharges in the carbon and alloy steels segment for each operation as applicable.

(1) *Electric arc furnaces.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

(2) *Vacuum degassing; continuous casting.* The following table is Effluent Limitations (BAT) for vacuum degassing and continuous casting:

CARBON AND ALLOY STEELS—EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.0000122	0.00000634
Zinc	0.0000101	0.00000450

[1] Pounds per ton of product.

(3) *Hot forming operations.* The following table is Effluent Limitations (BAT) for hot forming operations:

CARBON AND ALLOY STEELS—EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.0000609	0.0000317
Zinc	0.0000506	0.0000225

[1] Pounds per ton of product.

(4) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

(b) *Stainless Steels.* The following effluent limitations apply to discharges in the stainless steels segment for each operation as applicable.

(1) *Electric arc furnaces.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

(2) *Vacuum degassing; continuous casting.* The following table is Effluent Limitations (BAT) for vacuum degassing and continuous casting:

STAINLESS STEELS—EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
Chromium	0.00000808	0.00000362
Nickel	0.0000275	0.0000144

[1] Pounds per ton of product.

(3) *Hot forming operations.* The following table is Effluent Limitations (BAT) for hot forming operations:

STAINLESS STEELS—EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
Chromium	0.0000404	0.0000181
Nickel	0.000137	0.0000720

[1] Pounds per ton of product.

(4) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to waters of the U.S.

§ 420.55 New Source Performance Standards (NSPS).

New sources subject to this subpart must achieve the following new source performance standards (NSPS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after [insert date 10 years prior to the date that is 60 days after the publication date of the final rule] and before [insert date that is 60 days after the publication date of the final rule] must continue to achieve the standards specified in the 2000 version of § 420.74. toxic and nonconventional pollutants, those standards shall not apply after the expiration of the applicable time period specified in 40 CFR 122.29(d)(1); thereafter, the source must achieve the standards specified in § 420.54.

(b) The following standards apply with respect to each new source that commences construction after [insert date that is 60 days after the publication date of the final rule].

(1) *Carbon and alloy steels.* The following performance standards apply to discharges in the carbon and alloy steels segment for each operation as applicable: There shall be no discharge of process wastewater pollutants to waters of the U.S.

(2) *Stainless steels.* The following performance standards apply to discharges in the stainless steels segment for each operation as applicable: There shall be no discharge of process wastewater pollutants to waters of the U.S.

§ 420.56 Pretreatment Standards for Existing Sources (PSES).

Except as provided in 40 CFR 403.7and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

(a) *Carbon and alloy steels.* The following pretreatment standards apply to discharges in the carbon and alloy steels segment for each operation as applicable:

(1) *Electric arc furnace steelmaking—semi-wet.* [Reserved.]

(2) *Vacuum degassing; continuous casting.* The following table is Pretreatment Standards (PSES) for vacuum degassing and continuous casting:

CARBON AND ALLOY STEELS.—PRETREATMENT STANDARDS (PSES)

	Maximum daily [1]	Maximum monthly avg.[1]
Lead	0.0001878	0.0000626
Zinc	0.000282	0.0000938

[1] Pounds per ton of product.

(3) *Hot forming operations.* Any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

(4) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to POTWs.

(b) *Stainless steels.* The following pretreatment standards apply to discharges in the stainless steels segment for each operation as applicable.

(1) *Electric arc furnaces.* There shall be no discharge of process wastewater pollutants to POTWs.

(2) *Vacuum degassing; continuous casting.* The following table is Pretreatment Standards (PSES) for vacuum degassing and continuous casting:

STAINLESS STEELS—PRETREATMENT STANDARDS (PSES)

	Maximum daily [1]	Maximum monthly avg.[1]
Chromium	0.00000808	0.00000362
Nickel	0.0000275	0.0000144

[1] Pounds per ton of product.

(3) *Hot forming operations.* The following table is Pretreatment Standards (PSES) for hot forming operations:

STAINLESS STEELS—PRETREATMENT STANDARDS (PSES)

	Maximum daily [1]	Maximum monthly avg.[1]
Chromium	0.0000404	0.0000181
Nickel	0.000137	0.0000720

[1] Pounds per ton of product.

(4) *Ladle Metallurgy.* There shall be no discharge of process wastewater pollutants to POTWs.

§ 420.57 Pretreatment Standards for New Sources (PSNS).

New sources subject to this subpart must achieve the following pretreatment standards for new sources (PSNS), as applicable.

(a) Any new source subject to the provisions of this section that commenced discharging after [insert date 10 years prior to the date that is 60 days after the publication date of the final rule] and before [insert date that is 60 days after the publication date of the final rule] must continue to achieve the standards specified in the 2000 version of § 420.76 for ten years beginning on the date the source commenced discharge or during the period of depreciation or amortization of the facility, whichever comes first, after which the source must achieve the standards specified in § 420.56.

(b) Except as provided in 40 CFR 403.7, the following standards apply with respect to each new source that commences construction after [insert date that is 60 days after the publication date of the final rule]:

(1) *Carbon and alloy steels.* The following performance standards apply to discharges in the carbon and alloy steels segment for each operation as applicable: There shall be no discharge of process wastewater pollutants to POTWs.

(2) *Stainless steels.* The following effluent limitations apply to discharges in the stainless steels segment for each operation as applicable: There shall be no discharge of process wastewater pollutants to POTWs.

Subpart F—Steel Finishing Subcategory

§ 420.60 Applicability.

(a) The provisions of this subpart are applicable to discharges and the introduction of pollutants into publicly owned treatment works resulting from carbon, alloy and stainless steel finishing operations. Such operations include descaling, acid pickling, cold rolling and annealing, acid and alkaline cleaning, continuous hot dip coating and electroplating of metals on steels.

(b) Wastewater discharges from the following operations on steel are subject to this subpart: Cold forming, continuous electroplating, or continuous hot dip coating of sheets, strips or plates.

(c) This subpart does not apply to discharges of process wastewater from surface finishing or cold forming operations on steel wire, rod, bar, pipe or tubing. This subpart does not apply to process wastewater from these same operations when they are performed on base materials other than steel. Wastewater discharges from performing these operations are subject to 40 CFR part 438.

§ 420.61 Subcategory definitions.

As used in this subpart:

(a) *Product* means:

(1) Steel processed (including rework) for descaling, acid pickling and acid or alkaline cleaning operations;

(2) Finished rolled steel for cold rolling and annealing operations; and

(3) Finished coated steel for hot coating and electroplating operations. The daily operating (production) rate shall be determined in accordance with § 420.3.

(b) *Acid cleaning* means surface treatment of steel products using acid solutions conducted after cold rolling operations and prior to subsequent surface coating operations, and associated rinsing operations.

(c) *Acid pickling* means the first surface treatment of steel products using acid solutions conducted after hot forming operations for chemical removal of oxides and scale, and associated rinsing operations.

(d) *Acid purification units* or acid recovery units means those devices used for recovery and/or reconstitution of acid solutions from used acid pickling solutions.

(e) *Acid regeneration* means recovery of hydrochloric acid from used pickling solutions.

(f) *Alkaline cleaning* means surface treatment of steel products using alkaline solutions and associated rinses, which are conducted after cold rolling operations and prior to subsequent surface coating operations.

(g) *Bar* means a finished hot-rolled steel product.

(h) *Batch* means those steel finishing operations in which semi-finished steel products are processed in discrete batches.

(i) *Cold forming* means operations conducted on unheated steel for purposes of imparting desired mechanical properties and surface qualities (density, smoothness) to the steel.

(j) *Cold working* means operations (rolling, forging, stretching) conducted on unheated (often ambient temperature) steel that change structure, shape and create a permanent increase in hardness and strength.

(k) *Combination* means cold rolling operations which include recirculation of rolling solutions at one or more mill stands, and once-through use of rolling solutions at the remaining stand or stands.

(l) *Combination pickling* means acid pickling operations using more than one acid solution or mixed acid solutions.

(m) *Continuous* means operations in which semi-finished steel products are processed on a continuous or semi-continuous basis.

(n) *Descaling* means removal of scale from semi-finished steel products by action of molten salt baths or chemical solutions.

(o) *Direct application* means cold rolling operations which include once-through use of rolling solutions at all mill stands.

(p) *Electrolytic descaling* means removal of scale from semi-finished steel products by electrolysis utilizing sodium sulfate solutions.

(q) *Electroplating* means the application of metal coatings including, but not limited to, chromium, copper, nickel, tin, zinc and combinations thereof on steel products using an electro-chemical process.

(r) *Flat bar* means a semi-finished hot-rolled flat steel product.

(s) *Fume scrubbers* means emission control devices used to collect and clean fumes originating in acid pickling, acid cleaning, alkaline cleaning and steel coating operations.

(t) *Hot coating-galvanizing* means coating steel products with zinc or mixtures of zinc and aluminum by the hot dip process, including related operations preceding and subsequent to immersing the steel in the molten metal.

(u) *Hot coating-terne* means coating steel products with terne (lead and zinc) metal by the hot dip process, including related operations proceeding and subsequent to immersing the steel in the molten metal.

(v) *Hydrochloric acid pickling* means acid pickling operations using hydrochloric acid solutions.

(w) *Miscellaneous steel products* means flat rolled strip and sheet steel products other than wire and fasteners.

(x) *Multiple stands* means those recirculation or direct application cold rolling mills which include more than one stand of work rolls.

(y) *Other hot coating* means coating steel products with metals other than zinc or terne metal by the hot dip process, including related operations preceding and subsequent to immersing the steel in the molten metal.

(z) *Pickling* means the descaling process by which the hard black oxide formed on the steel surface during hot rolling is removed by the chemical action of acids.

(aa) *Recirculation* means cold rolling operations which include recirculation of rolling solutions at all mill stands.

(bb) *Salt bath descaling-reducing* means the removal of scale from semi-finished steel products by action of molten salt baths containing sodium hydride.

(cc) *Salt bath descaling-oxidizing* means removal of scale from semi-finished steel by action of molten salt baths other than those containing sodium hydride.

(dd) *Single stand* means those recirculation or direct application cold rolling mills which include only one stand of work rolls.

(ee) *Spent acid solution (or spent pickle liquor)* means acid solutions which are no longer effective and are discharged or removed from the pickling process.

(ff) *Tube* means a hollow steel cylinder formed usually from a strip.

(gg) *Wire rod* means a semi-finished steel product of circular cross section, generally with a diameter of approximately 0.25 inches.

§ 420.62 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve, for each applicable operation, the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

PERFORMANCE STANDARDS (BPT)

Pollutant TSS	Maximum daily [1]	Maximum monthly avg.[1]
(a) Salt bath descaling-oxidizing:		
(1) batch, sheet and plate	0.408	0.175
(2) batch, rod	0.246	0.105
(3) batch, pipe and tubes	0.992	0.426
(4) continuous	0.193	0.0826
(b) Salt bath descaling-reducing:		
(1) batch	0.190	0.0814
(2) continuous	1.06	0.456
(c) Acid pickling-sulfuric:		
(1) rod, coil	0.164	0.070
(2) bar, billet, bloom	0.0526	0.0226
(3) strip, sheet and plate	0.105	0.045
(4) pipe, tubes and other products	0.292	0.125
(d) Acid pickling-hydrochloric:		
(1) rod, coil	0.286	0.123
(2) strip, sheet and plate	0.164	0.070
(3) pipe, tubes and other products	0.596	0.256
(e) Acid pickling-combination:		
(1) rod, coil	0.298	0.128
(2) bar, billet, bloom	0.134	0.0576
(3) strip, sheet and plate-continuous	0.876	0.376
(4) strip, sheet and plate-batch	0.268	0.115
(5) pipe, tubes and other products	0.450	0.193
(f) Cold rolling mills:		
(1) recirculation-single stand	0.0025	0.00125

PERFORMANCE STANDARDS (BPT)—Continued

Pollutant TSS	Maximum daily [1]	Maximum monthly avg.[1]
(2) recirculation-multiple stands	0.0125	0.00626
(3) combination	0.150	0.0752
(4) direct application-single stand	0.045	0.0226
(5) direct application-mult. stands	0.200	0.100
(g) Alkaline cleaning:		
(1) batch	0.146	0.0626
(2) continuous	0.204	0.0876
(h) Hot coating: galvanizing, terne, other metals:		
(1) strip, sheet and miscellaneous products	0.350	0.150
(i) Electroplating	[2] 60	[2] 31
(j) Fume scrubbers		
Acid pickling, alkaline cleaning, hot coating, other	[3] 12.58	[3] 5.39
(k) Absorber vent scrubber, hydrochloric acid regeneration	[3] 84.04	[3] 35.86

Pollutant oil & grease	Maximum daily [1]	Maximum monthly avg.[1]
(a) Salt bath descaling-oxidizing:		
(1) batch, sheet and plate	NA	NA
(2) batch, rod	NA	NA
(3) batch, pipe and tubes	NA	NA
(4) continuous	NA	NA
(b) Salt bath descaling-reducing:		
(1) batch	NA	NA
(2) continuous	NA	NA
(c) Acid pickling-sulfuric [4]:		
(1) rod, coil	0.0700	0.0234
(2) bar, billet, bloom	0.0226	0.00750
(3) strip, sheet and plate	0.0450	0.0150
(4) pipe, tubes and other products	0.125	0.0418
(d) Acid pickling-hydrochloric [4]:		
(1) rod, coil	0.123	0.0408
(2) strip, sheet and plate	0.0700	0.0234
(3) pipe, tubes and other products	0.256	0.0852
(e) Acid pickling-combination [4]:		
(1) rod, coil	0.128	0.0426
(2) bar, billet, bloom	0.0576	0.0192
(3) strip, sheet and plate-continuous	0.376	0.125
(4) strip, sheet and plate-batch	0.115	0.0384
(5) pipe, tubes and other products	0.193	0.0644
(f) Cold rolling mills:		
(1) recirculation-single stand	0.00104	0.000418
(2) recirculation-multiple stands	0.0522	0.00208
(3) combination	0.0626	0.0250
(4) direct application-single stand	0.0188	0.00752
(5) direct application-mult. stands	0.0834	0.0334
(g) Alkaline cleaning:		
(1) batch	0.0626	0.0208
(2) continuous	0.0876	0.0292
(h) Hot coating: galvanizing, terne, other metals:		
(1) strip, sheet and miscellaneous products	0.150	0.0500
(i) Electroplating	[2] 52	[2] 26
(j) Fume scrubbers:		
Acid pickling, alkaline cleaning, hot coating, other	[3] 5.39	[3] 1.76
(k) Absorber vent scrubber, hydrochloric acid regeneration	[3] 35.86	[3] 11.99

[1] Pounds per ton of product for all operations except electroplating, fume scrubbers, and adsorber vent scrubbers.
[2] The values are expressed in milligrams per liter for this operation.
[3] The values are expressed in pounds per day for this operation.
[4] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.

§ 420.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best control technology for conventional pollutants (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in 40 CFR 401.16) in § 420.62 of this subpart for the best practicable control technology currently available (BPT).

§ 420.64 Effluent limitations attainable by the application of the best available control technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).

(a) *Ammonia (as N)* (1) *Stainless Steel.* The following effluent limitations apply to discharges in the stainless steels segment for each operation as applicable. Increased mass discharges may be provided by the permit authority on a site-specific basis to account for unregulated process wastewaters and non-process wastewaters (*e.g.*, oily wastewater from hot forming mill basements and roll shops, tramp oils from mill oil collection systems, utility wastewaters, groundwater remediation wastewaters), but only to the extent such flows are co-treated with process wastewaters regulated by this subpart and generate an increased effluent volume. Such increased mass discharges shall be calculated as a percentage increase of the mass discharge otherwise applicable on the basis of the increased effluent volume.

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
(i) Acid pickling and other descaling:		
(A) bar, billet	0.0437	0.0287
(B) pipe, tube	0.146	0.0960
(C) plate	0.00665	0.00436
(D) strip, sheet	0.133	0.0873
(ii) Wet air pollution control devices:		
(A) fume scrubbers	[2] 4.109	[2] 2.69

[1] Pounds per ton of product for all operations except fume scrubbers.
[2] The values are expressed in pounds per day for this operation.

(b) *Chromium (VI).* (1) *Carbon and Alloy Steel.* The following effluent limitations apply to discharges in the carbon and alloy steels segment for each operation as applicable. Increased mass discharges may be provided by the permit authority on a site-specific basis to account for unregulated process wastewaters and non-process wastewaters (*e.g.,* oily wastewater from hot forming mill basements and roll shops, tramp oils from mill oil collection systems, utility wastewaters, groundwater remediation wastewaters), but only to the extent such flows are co-treated with process wastewaters regulated by this subpart and generate an increased effluent volume. Such increased mass discharges shall be calculated as a percentage increase of the mass discharge otherwise applicable on the basis of the increased effluent volume. The effluent limitations for chromium (VI) shall be applicable only when chromium (VI) is present in untreated wastewaters as a result of process or other operations.

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
(i) Acid pickling—hydrochloric:		
(A) bar, billet, rod, coil	0.0000508	0.0000463
(B) pipe, tube	0.000106	0.0000963
(C) plate	0.0000363	0.00000330
(D) strip, sheet	0.0000518	0.00000472
(ii) Acid pickling—sulfuric:		
(A) bar, billet, rod, coil	0.0000290	0.0000264
(B) pipe, tube	0.0000518	0.0000472
(C) plate	0.00000363	0.00000330
(D) strip, sheet	0.0000238	0.0000217
(iii) Acid regeneration:		
(A) fume scrubbers	[2] 0.0149	[2] 0.0136
(iv) Alkaline cleaning:		
(A) pipe, tube	0.00000207	0.00000189
(B) strip, sheet	0.0000363	0.0000330
(v) Cold forming:		
(A) direct application-single stand	0.000000311	0.000000283
(B) direct application-multiple stands	0.0000285	0.0000260
(C) recirculation-single stand	0.000000104	0.000000944
(D) recirculation-multiple stands	0.00000259	0.00000236
(E) combination-multiple stand	0.0000148	0.0000135
(vi) Continuous annealing lines	0.00000207	0.00000189

EFFLUENT LIMITATIONS (BAT)—Continued

	Maximum daily [1]	Maximum monthly avg.[1]
(vii) Electroplating:		
(A) plate	0.00000363	0.00000330
(B) strip, sheet: tin, chromium	0.000114	0.000104
(C) strip, sheet: zinc, other metals	0.0000570	0.0000519
(viii) Hot coating:		
(A) galvanizing, terne and other metals	0.0000570	0.0000519
(ix) Wet air pollution control devices:		
(A) fume scrubbers	[2] 0.00224	[2] 0.00204

[1] Pounds per ton of product for all operations except fume scrubbers.
[2] The values are expressed in pounds per day for this operation.

(2) *Stainless Steel.* The following effluent limitations apply to discharges in the stainless steels segment for each operation as applicable. Increased mass discharges may be provided by the permit authority on a site-specific basis to account for unregulated process wastewaters and non-process wastewaters (*e.g.,* oily wastewater from hot forming mill basements and roll shops, tramp oils from mill oil collection systems, utility wastewaters, groundwater remediation wastewaters), but only to the extent such flows are co-treated with process wastewaters regulated by this subpart and generate an increased effluent volume. Such increased mass discharges shall be calculated as a percentage increase of the mass discharge otherwise applicable on the basis of the increased effluent volume.

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
(i) Acid pickling and other descaling:		
(A) bar, billet	0.000318	0.000196
(B) pipe, tube	0.00107	0.000655
(C) plate	0.0000484	0.0000298
(D) strip, sheet	0.000969	0.000595
(ii) Acid regeneration:		
(A) fume scrubbers	[2] 0.199	[2] 0.122
(iii) Alkaline cleaning:		
(A) pipe, tube	0.0000277	0.0000170
(B) strip, sheet	0.00346	0.00213
(iv) Cold forming:		
(A) direct application-single stand	0.0000484	0.0000298
(B) direct application-multiple stands	0.000381	0.000234
(C) recirculation-single stand	0.00000415	0.00000255
(D) recirculation-multiple stands	0.0000221	0.0000136
(E) combination-multiple stand	0.000198	0.000122
(v) Continuous annealing	0.0000277	0.0000170
(vi)Wet air pollution control devices:		
(A) fume scrubbers	[2] 0.0299	[2] 0.0184

[1] Pounds per ton of product for all operations except fume scrubbers.
[2] The values are expressed in pounds per day for this operation.

(c) *Chromium.* (1) *Carbon and Alloy Steel.* The following effluent limitations apply to discharges in the carbon and alloy steels segment for each operation as applicable. Increased mass discharges may be provided by the permit authority on a site-specific basis to account for unregulated process wastewaters and non-process wastewaters (*e.g.,* oily wastewater from hot forming mill basements and roll shops, tramp oils from mill oil collection systems, utility wastewaters, groundwater remediation wastewaters), but only to the extent such flows are co-treated with process wastewaters regulated by this subpart and generate an increased effluent volume. Such increased mass discharges shall be calculated as a percentage increase of the mass discharge otherwise applicable on the basis of the increased effluent volume. The effluent limitations for chromium shall be applicable only when chromium is present in untreated wastewaters as a result of process or other operations.

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
(i) Acid pickling—hydrochloric:		
(A) bar, billet, rod, coil	0.000227	0.000117
(B) pipe, tube	0.000472	0.000243
(C) plate	0.0000162	0.00000834

EFFLUENT LIMITATIONS (BAT)—Continued

	Maximum daily [1]	Maximum monthly avg.[1]
(D) strip, sheet	0.0000231	0.0000119
(ii) Acid pickling—sulfuric:		
(A) bar, billet, rod, coil	0.000130	0.0000668
(B) pipe, tube	0.000231	0.000119
(C) plate	0.0000162	0.00000834
(D) strip, sheet	0.000106	0.0000548
(iii) Acid regeneration:		
(A) fume scrubbers	[2] 0.0666	[2] 0.0343
(iv) Alkaline cleaning:		
(A) pipe, tube	0.00000925	0.00000477
(B) strip, sheet	0.000162	0.0000834
(v) Cold forming:		
(A) direct application-single stand	0.00000139	0.000000715
(B) direct application-multiple stands	0.000127	0.0000656
(C) recirculation-single stand	0.000000463	0.000000238
(D) recirculation-multiple stands	0.0000116	0.00000596
(E) combination-multiple stand	0.0000662	0.0000341
(vi) Continuous annealing lines	0.00000925	0.00000477
(vii) Electroplating:		
(A) plate	0.0000162	0.00000834
(B) strip, sheet: tin, chromium	0.000509	0.000262
(C) strip, sheet: zinc, other metals	0.000255	0.000131
(viii) Hot coating:		
(A) galvanizing, terne and other metals	0.000255	0.000131
(ix) Wet air pollution control devices:		
(A) fume scrubbers	[2] 0.00999	[2] 0.00515

[1] Pounds per ton of product for all operations except fume scrubbers.
[2] The values are expressed in pounds per day for this operation.

(2) *Stainless Steel.* The following effluent limitations apply to discharges in the stainless steels segment for each operation as applicable. Increased mass discharges may be provided by the permit authority on a site-specific basis to account for unregulated process wastewaters and non-process wastewaters (*e.g.,* oily wastewater from hot forming mill basements and roll shops, tramp oils from mill oil collection systems, utility wastewaters, groundwater remediation wastewaters), but only to the extent such flows are co-treated with process wastewaters regulated by this subpart and generate an increased effluent volume. Such increased mass discharges shall be calculated as a percentage increase of the mass discharge otherwise applicable on the basis of the increased effluent volume.

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
(i) Acid pickling and other descaling:		
(A) bar, billet	0.000500	0.000280
(B) pipe, tube	0.00167	0.000939
(C) plate	0.0000760	0.0000427
(D) strip, sheet	0.00152	0.000854
(ii) Acid regeneration:		
(A) fume scrubbers	[2] 0.313	[2] 0.176
(iii) Alkaline cleaning:		
(A) pipe, tube	0.0000434	0.0000244
(B) strip, sheet	0.00543	0.00305
(iv) Cold forming:		
(A) direct application-single stand	0.0000760	0.0000427
(B) direct application-multiple stands	0.000597	0.000335
(C) recirculation-single stand	0.00000652	0.00000366
(D) recirculation-multiple stands	0.0000348	0.0000195
(E) combination-multiple stand	0.000311	0.000174
(v) Continuous annealing	0.0000434	0.0000244
(vi) Wet air pollution control devices:		
(A) fume scrubbers	[2] 0.0469	[2] 0.0263

[1] Pounds per ton of product for all operations except fume scrubbers.
[2] The values are expressed in pounds per day for this operation.

(d) *Fluoride.* (1) *Stainless Steel.* The following effluent limitations apply to discharges in the stainless steels segment for each operation as applicable. Increased mass discharges may be provided by the permit authority on a site-specific basis to account for unregulated process wastewaters and non-process wastewaters (*e.g.,* oily wastewater from hot forming mill basements and roll shops, tramp oils from mill oil collection systems, utility wastewaters, groundwater remediation wastewaters), but only to the extent such flows are co-treated with process wastewaters regulated by this subpart and generate an increased effluent volume. Such increased mass discharges shall be calculated as a percentage increase of the mass discharge otherwise applicable on the basis of the increased effluent volume.

EFFLUENT LIMITATIONS (BAT)

	Maximum daily [1]	Maximum monthly avg.[1]
(i) Acid pickling and other descaling:		
(A) bar, billet	0.0446	0.0356
(B) pipe, tube	0.149	0.119
(C) plate	0.00679	0.00542
(D) strip, sheet	0.136	0.108
(ii) Wet air pollution control devices:		
(A) fume scrubbers	[2] 4.19	[2] 3.34

[1] Pounds per ton of product for all operations except fume scrubbers.
[2] The values are expressed in pounds per day for this operation.

(e) *Lead.* (1) *Carbon and Alloy Steel.* The following effluent limitations apply to discharges in the carbon and alloy steels segment for each operation as applicable. Increased mass discharges may be provided by the permit authority on a site-specific basis to account for unregulated process wastewaters and non-process wastewaters (*e.g.,* oily wastewater from hot forming mill basements and roll shops, tramp oils from mill oil collection systems, utility wastewaters, groundwater remediation wastewaters), but only to the extent such flows are co-treated with process wastewaters regulated by this subpart and generate an increased effluent volume. Such increased mass discharges shall be calculated as a percentage increase of the mass discharge otherwise applicable on the basis of the increased effluent volume.

EFFLUENT LIMITATIONS (BAT)

	Maximum daily[1]	Maximum monthly avg.[1]
(i) Acid pickling—hydrochloric:		
(A) bar, billet, rod, coil	0.000596	0.000311
(B) pipe, tube	0.00124	0.000647
(C) plate	0.0000426	0.0000222
(D) strip, sheet	0.00609	0.0000317
(ii) Acid pickling—sulfuric:		
(A) bar, billet, rod, coil	0.000341	0.000178
(B) pipe, tube	0.000609	0.000317
(C) plate	0.0000426	0.0000222
(D) strip, sheet	0.000280	0.000146
(iii) Acid regeneration:		
(A) fume scrubbers	[2] 0.175	[2] 0.913
(iv) Alkaline cleaning:		
(A) pipe, tube	0.0000243	0.0000127
(B) strip, sheet	0.000426	0.000222
(v) Cold forming:		
(A) direct application-single stand	0.00000365	0.00000190
(B) direct application-multiple stands	0.000335	0.000174
(C) recirculation-single stand	0.00000122	0.00000634
(D) recirculation-multiple stands	0.0000304	0.0000159
(E) combination-multiple stand	0.000174	0.0000907
(vi) Continuous annealing lines	0.0000243	0.0000127
(vii) Electroplating:		
(A) plate	0.0000426	0.0000222
(B) strip, sheet: tin, chromium	0.000134	0.000698
(C) strip, sheet: zinc, other metals	0.000669	0.000349
(viii) Hot coating:		
(A) galvanizing, terne and other metals	0.000669	0.000349
(ix) Wet air pollution control devices:		
(A) fume scrubbers	[2] 0.026396	[2] 0.0137

[1] Pounds per ton of product for all operations except fume scrubbers.
[2] The values are expressed in pounds per day for this operation.