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John A. Little,
Acting Regional Administrator.
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40 CFR Part 410

[WH-FRL 1738-3]

Textile Mills Point Source Category, Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability.

SUMMARY: EPA is making available additional information relating to the proposed effluent limitations and standards for the Textile Mills Point Source Category as published October 29, 1979 (44 FR 62204). Some of the information is correspondence files not originally included in the administrative record. Other information relates to the removal of toxic pollutants by publicly owned treatment works (POTWs). In addition, this notice presents possible revisions to BOD, COD, TSS and total phenols effluent limitations and standards resulting from changes in subcategorization, expansion of the data base and modifications in statistical methodology. There are also new data that EPA is considering as a basis for changing the regulation relating to control of toxic metals in textile mill effluents. Finally, EPA is considering changing certain assumptions in its estimate of cost of the technologies selected for BCT, BAT, NSPS, PSES and PSNS. The purpose of this notice is to invite comments related to this information.

DATES: A period of 45 days from the date of publication in the Federal Register will be allowed for submission of comments on this proposal. Comments must be submitted to the address below by March 13, 1981.

ADDRESS: Send comments to James R. Berlow, Effluent Guidelines Division, Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460. Attention: EGD Docket Clerk, Textiles, (WH-552). A copy of the supporting information and all public comments submitted in response to this proposal will be available for inspection and copying at the EPA Public Information Reference Unit, Room 2404 (Rear) PM-213. (EPA Library), 401 M Street S.W., Washington, D.C. 20460. The EPA information regulation (40 CFR Part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: James Berlow (202) 426-2554.

SUPPLEMENTARY INFORMATION: On October 29, 1979, the Environmental Protection Agency proposed a regulation to establish best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) limitations for existing sources, new source performance standards (NSPS), and pretreatment standards for existing and new sources (PSES and PSNS) for the Textile Mills Point Source Category under the Clean Water Act, 33 U.S.C. 1251 *et seq.* (44 FR 62204). The public comment period on the proposed regulation closed February 15, 1980. The Agency is now reopening the comment period for 45 days to accept public comment on the additional information discussed below. Public comment must be limited to the information discussed below.

I. Correspondence Files and POTW Data

When the Agency proposed the effluent limitations and standards, it compiled the administrative record of the Agency's actions for review by the public. Subsequently, the Agency discovered that some general correspondence files of the project officer were not included in the administrative record. Therefore, EPA is adding these materials to the administrative record and making them available for public comment.

In addition, EPA has developed information on the capability of publicly owned treatment works (POTWs) to remove toxic pollutants. These data are useful in determining whether pollutants "pass through" the POTW. Under Section 307(b) of the Clean Water Act, EPA must establish national pretreatment standards for pollutants that pass through. EPA's approach in determining whether pollutants are passing through the POTW is based on the fundamental principal established by Congress that the amount of pollutants discharged by an indirect discharger and the POTW acting together should not exceed the amount of pollutants discharged by a direct discharger. In making this determination, EPA compares the percent of a specific pollutant removed by a POTW with the percent removal obtained by a direct discharger applying best available technology. If the POTW removes less than would be removed by a direct discharger, the pollutant is deemed to be passing through and EPA will establish technology-based pretreatment standards. EPA believes that these new data support its decision that toxic metals contributed by the

textile industry pass through the POTWs and, accordingly, that indirect dischargers should pretreat their wastewater. These data are being made available in the Public Information Reference Unit and public comment is invited. For more information of the Agency's pretreatment policy, persons are referred to the general pretreatment regulations, 40 CFR Part 403.

II. Changes in Subcategorization

In response to the comments submitted on the proposed regulation, EPA has reviewed the definitions of the industry subcategories. As a result of this review, the Agency is considering three changes. First, EPA would include a separate subdivision of the Low Water Use Processing Subcategory for greige mills using water jet weaving. The wastewater discharged per ton of production is higher for these mills than the rest of the subcategory therefore justifying separate limitations for water jet weaving. In addition, water jet weaving is a new process which was not considered in the 1974 promulgated regulation. Second, several commenters suggested that the proposed effluent limitations and standards for the subdivisions of the Woven Fabric Finishing Subcategory (Simple Processing, Complex Processing, and Complex Plus Desizing) encouraged the use of bleaching at mills in the Simple Processing Subdivision that also perform desizing on greater than 50 percent of their production. By adding an unnecessary bleaching operation these mills would qualify for the Complex Plus Desizing Subdivision which has less stringent limitations and standards. EPA agrees that this situation is undesirable and is considering placing all mills desizing greater than 50 percent of their production in a single Desizing Subdivision. Mills desizing 50 percent or less of their production would continue to qualify for the Simple or Complex Processing Subdivisions based on the definition of those subdivisions provided in the proposed regulation (44 FR 62210). Third, EPA is considering alteration of the definition of Knit Fabric Finishing—Complex Processing Subdivision to include mills that perform fabric scouring on greater than 50 percent of their production in addition to performing dyeing or printing operations on greater than 5 percent of their production. Scouring previously was not an operation that placed a mill in the Complex Processing Subdivision. The Agency has reviewed its data and found that fabric scouring contributes significantly to the wastewater discharge. Therefore, addition of scouring to the list of complex

processing operations is appropriate. This change would result in less stringent limitations and standards for the Complex Processing Subdivision because of the increase in the median wastewater discharge rate. The Simple Processing Subdivision also would have slightly more stringent limitations and standards. These more stringent limitations and standards are the result of a decreased median wastewater discharge rate and, in the case of COD, an improved performance for biological treatment. This change is consistent with the public comments.

III. BOD, COD, TSS and Total Phenols Effluent Limitations

EPA proposed BAT effluent limitations and NSPS for COD, TSS and total phenols and BCT effluent limitations and NSPS for BOD and TSS. (See 44 FR 62230-62241). EPA based these proposed limitations and standards on wastewater flow and pollutant concentration data acquired from textile mills in each of the nine subcategories. (See Sections V and VII of the *Development Document for Effluent Limitations Guidelines and Standards for the Textile Mills Point Source Category* (Proposed), EPA 440/1-79/022b, October 1979—hereinafter cited as *Development Document*). EPA derived the limitations and standards from the application of statistical techniques to the flow and concentration data. (See Sections IX and X of the *Development Document*). During the process of examining the public comments and developing the final regulation, EPA extensively reviewed the data base supporting the proposed limitations and standards. This review led EPA to make changes in the data base including a request for additional data from 10 mills which had submitted only limited data to the Agency. In response to this request, the Agency has received a substantial amount of new data from the 10 mills. In addition, EPA reviewed and revised the statistical methods used to derive the effluent limitations and standards.

The expansion of the data base and the modification of the statistical methodology, as well as minor changes in subcategorization (Section II), have resulted in changes in the BAT effluent limitations and NSPS for COD, TSS and total phenols and the BCT effluent limitations and NSPS for BOD and TSS. In this notice, EPA will discuss the new data, the modifications to the methodology, and the revised effluent limitations and standards.

A. New Data

EPA derived its proposed effluent limitations and standards from flow and concentration data from 75 textile mills (including three mills which provided flow data only). The 75 mills were chosen to establish the performance of extended aeration activated sludge biological treatment—a technology that is the first step in BCT, BAT and NSPS technology for all subcategories. After the close of the comment period, EPA reevaluated the technology installed at the 75 mills and determined that nine of the mills should be deleted from the data base because those mills do not have the appropriate technology as defined by EPA. Data from another nine mills with the appropriate biological treatment technologies have been added to the data base. An explanation of the reasons for the deletion or selection of each of the mills is included in the record. In addition, EPA reviewed the data from the new group of 75 mills and concluded that additional data should be collected from 10 of the 75 mills because those 10 mills had provided only limited data to the Agency during the initial data collection efforts. EPA determined that there was sufficient flow and concentration data from the other 65 mills.

EPA intended that its data request would provide additional daily monitoring data. EPA specifically requested results of treatment technology performance for the most recent full year of operation in the hope that more complete data now would be available. All 10 mills submitted new data. The new BOD, COD, TSS and total phenols data increase the number of data points submitted by these 10 mills from 115 to 2382.

Because of the change and increase in the size of the data base, EPA has decided to include these new data in the data base and recalculate proposed effluent limitations and standards. EPA is making these new data available for public review and invites comment on the data and the decision to recalculate proposed effluent limitations and standards based on these new data. The revised effluent limitations and standards are presented below.

B. Modification of the Methodology

In deriving BOD, COD, TSS, and total phenols effluent limitations and standards, three critical elements are used. First, the long term average of effluent measurements is calculated for each mill's biological treatment performance. Second, the variability of each mill's biological treatment performance is determined and

expressed as a variability factor. Third, an additional pollutant specific removal percentage is calculated for each technology selected for BCT, BAT, and NSPS. The proposed effluent limitations and standards are the product of the median long term average, median variability factor, and the removal percentage. Although this basic methodology remains unchanged, the calculation of each of these three elements has been altered.

(1) Long Term Average.

The long term average is the arithmetic average of all individual effluent data points from each mill in a subcategory. The pollutant specific median long term average of all mills in each subcategory is used to determine the effluent limitation or standard. EPA has changed the effluent limitation or standard. EPA has changed the calculated long term average by substituting the previously described nine new mills in the group of 75 mills and adding the new data collected from the 10 mills. The new data from the 10 mills resulted in revised long term averages for those 10 mills. In addition, long term averages were derived for the nine new mills.

The median long term averages which result from the new data are as follows:

Table 1.—Median long-term averages for biological treatment in mg/l

Subcategory	BOD	COD	TSS	Total phenols
1. Wool scouring	50	1,125	230	0.040
2. Wool finishing	25	215	60	.080
4a. Woven fabric finishing—simple processing	15	245	40	.035
4b. Woven fabric finishing—complex processing	20	300	40	.030
4c. Woven fabric finishing—desizing	25	255	55	.020
5a. Knit fabric finishing—simple processing	15	240	35	.040
5b. Knit fabric finishing—complex processing	20	280	50	.085
5c. Knit fabric finishing—hosiery products	15	240	35	.040
6. Carpet finishing	35	285	65	.100
7. Stock and yarn finishing	10	150	25	.050
8. Nonwoven manufacturing	35	285	65	.100
9. Felted fabric processing	25	215	60	.080

(2) Variability Factors.

The variability factor expresses the relationship between a value that would be exceeded rarely by a pollutant discharge for a single day or the average of 30 days and the average value of all effluent data points for a mill. The pollutant specific variability factors for each mill previously had been determined from the ratios of the maximum observed month (average of monthly data) to the average month (mean of monthly averages) and the maximum observed day to the average month. The new methodology relies on

the Agency's determination that pollutant measurements are a realization of a random variable with a lognormal probability distribution. The variability factors are defined as the ratio of the estimates of the 99th percentile of the daily or average 30 day distribution of effluent measurements to the estimated mean of the lognormal probability distribution. Therefore, the estimates of the 99th percentile and mean are derived from the theory of the lognormal distribution. A median variability factor for each pollutant is used to calculate the effluent limitations and standards for all subcategories.

In addition, the Agency has modified the list of mills used to calculate variability factors. In deriving the revised limitations and standards presented in this notice, only those mills used to calculate the long term average were considered for use in variability calculations. The Agency has determined that only the mills within this group which have provided individual data points for specific

pollutants, rather than monthly averages or unspecified aggregates of data points, can be used to calculate variability factors for those pollutants. Some mills provided individual data points for some pollutants but did not provide individual data points for other pollutants. Therefore, approximately 25 to 30 of the 75 mills are used for different pollutants in calculating variability factors.

The variability factors which result from the revised methodology and new data are as follows:

Median Daily Variability Factors:

BOD, 3.25—TSS, 3.64.
 COD, 2.36—Total Phenols, 4.83.

Median 30-Day Average Variability Factors:

BOD, 1.30—TSS, 1.34.
 COD, 1.19—Total Phenols, 1.49.

These variability factors are increased over those used previously with the exception of the 30 day factors for COD and total phenols. EPA is including a detailed discussion of the derivation of

the variability factors and complete statistical methodology in the public record. (See memorandum entitled "Revised Textile Industry Methodology" by EPA's Office of Analysis and Evaluation dated December, 1980).

(3) Removal Percentage.

The removal of BOD, COD, TSS, or total phenols (TP) after biological treatment provided by the technology identified as the basis for BCT, BAT, or NSPS previously was included in the calculation of limitations and standards as a single number for each technology and pollutant combination. As an example, multimedia filtration was estimated to remove 20% of COD. Upon reevaluating the data, EPA has concluded that separate removal factors should be used for the Wool Scouring Subcategory, Wool Finishing and Felted Fabric Processing Subcategories, and a third set of factors for the other five subcategories. The removals used in developing the revised limitations and standards are presented in Tables 2, 3, and 4.

Table 2.—Removal Percentages Attainable by Application of Best Conventional Pollutant Control Technology (BCT) ¹

Treatment technology	Wool scouring		Wool finishing and felted fabric		Other subcategories	
	BOD	TSS	BOD	TSS	BOD	TSS
Multimedia Filtration	35	45	55	80	25	45
Chemical coagulation and multimedia filtration			75	85	60	80

¹ For mills with production equal to or greater than production sizes listed in Table 6 of this notice. BCT for mills below these production limits would remain unchanged, i.e., equal to BPT limitations.

Table 3.—Removal Percentages Attainable by Application of Best Available Technology Economically Achievable (BAT)

Treatment technology	Wool scouring			Wool finishing and felted fabric			Other subcategories		
	TSS	COD	TP	TSS	COD	TP	TSS	COD	TP
Multimedia filtration	45	10	30	80	30	30	45	15	10
Chemical coagulation and multimedia filtration				85	75	40	80	55	35

Table 4.—Removal Percentages Attainable by Application of New Source Performance Standards (NSPS)

Treatment technology	Wool scouring				Wool finishing and felted fabric				Other categories			
	BOD	COD	TSS	TP	BOD	COD	TSS	TP	BOD	COD	TSS	TP
Multimedia filtration	35	10	45	30	55	30	80	30	25	15	45	10
Chemical coagulation and multimedia filtration					75	75	85	40	60	55	80	35

In Table 5 are the revised median wastewater discharge rates per mass

unit of production which facilitate the conversion of limitations and standards

from a concentration to a mass discharge rate.

Table 5—Median wastewater discharge rate per mass unit of production

Subcategory	1/kg	(gal/lb)
1. Wool scouring.....	11.7	(1.4)
2. Wool finishing.....	304.4	(36.5)
4. Woven fabric finishing:		
(a) Simple processing.....	76.7	(9.2)
(b) Complex processing.....	97.6	(11.7)
(c) Desizing.....	105.9	(12.7)
5. Knit fabric finishing:		
(a) Simple processing.....	117.6	(14.1)
(b) Complex processing.....	122.6	(14.7)
(c) Hosiery products.....	75.1	(9.0)
6. Carpet finishing.....	46.7	(5.6)
7. Stock and yarn finishing.....	96.7	(11.6)
8. Nonwoven manufacturing.....	40.0	(4.8)
9. Felted fabric processing.....	212.7	(25.5)

(4) Methodology for Hosiery Manufacturing, Nonwoven Manufacturing, and Felted Fabric Processing.

After reviewing the data collected to establish the performance of biological treatment for the Hosiery Manufacturing Subdivision of the Knit Fabric Finishing Subcategory, EPA determined that the data used in the proposed limitations and standards was inadequate. As part of the data collection described previously, additional analytical data were obtained for biological treatment at hosiery manufacturers. In EPA's engineering judgment, this data did not improve the Agency's data base because the data do not reflect the performance possible with normal extended aeration activated sludge biological treatment. Therefore, in computing the long term average for the Hosiery Manufacturing Subdivision, EPA is considering transferring the performance of biological treatment in the Simple Processing Subdivision of Knit Fabric Finishing with an adjustment for the difference in wastewater discharged per ton of production. This transfer is justified by the similarity in manufacturing operations, raw materials, and untreated wastewater characteristics between the two subdivisions. As a result of this change in performance, chemical coagulation will not be necessary prior to multimedia filtration in order to meet BCT and BAT limitations. The technology which EPA is considering for BCT for large mills (as described below) and BAT is biological treatment and multimedia filtration.

Adequate analytical data also were not available in order to determine the long term average performance of biological treatment for the Nonwoven Manufacturing and Felted Fabric Processing Subcategories. In the proposed effluent limitations and standards, EPA calculated this long term performance based on the adequate

analytical data available for untreated wastewater from these subcategories and the average removal of BOD, COD, TSS, and total phenols observed at biological treatment facilities in the other six textile industry subcategories (excluding Low Water Use Processing). Variability factors and removal percentages were calculated by the same procedure described above. EPA has reviewed the available data and is considering altering its approach. An engineering analysis of the manufacturing processes, combined with this analytical data, suggest that the performance of biological treatment in these two subcategories should be transferred from two specific subcategories in the textile industry instead of using the average removal observed in the entire industry.

For the Nonwoven Manufacturing Subcategory, the performance of biological treatment for BOD, COD and TSS would be based on the long term average performance in the Carpet Manufacturing Subcategory adjusted for the difference in wastewater discharge per ton of production. The use of these data is appropriate because of the similarity in untreated wastewater concentrations of these pollutants. The manufacturing operations generating the pollutants also are similar in that bonding agents such as latex and acrylics are present in both wastewaters. The untreated total phenols concentration of 30 µg/l is used in place of the long term average because it is EPA's judgment that biological treatment will not reduce that concentration.

For the Felted Fabric Processing Subcategory, the BOD, COD, TSS and total phenols biological and advanced treatment performance observed in the Wool Finishing Subcategory is being considered for calculation of the long term average. The use of these performance data is justified by the similarity in untreated wastewater concentrations, processing operations (especially fulling), raw materials (wool and wool blends) and processing chemicals. The calculations include an adjustment for the difference in the wastewater discharge rate per ton of production.

C. Revised Effluent Limitations

EPA has calculated revised BCT and BAT limitations and NSPS using the expanded data base, the modified

statistical methodology and changed subcategories. These revised limitations and standards are presented in Tables 6, 7, and 8 below.

Table 6.—BCT Effluent Limitations

Wool Scouring Subcategory

[Less than 1,600 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD.....	10.6	5.3
TSS.....	32.2	16.1

[1,600 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD.....	1.2	0.5
TSS.....	5.3	1.9

Wool Finishing Subcategory

[Less than 11,800 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD.....	22.4	11.2
TSS.....	35.2	17.6

[11,800 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD.....	6.1	2.4
TSS.....	9.7	3.7

Low Water Use Processing Subcategory—General Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD.....	1.4	0.70
TSS.....	1.4	.70

**Low Water Use Processing Subcategory—
Water Jet Weaving**

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	1.4	0.70
TSS	1.4	.70

Woven Fabric Finishing Subcategory—Simple Processing

[Less than 9,900 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	6.6	3.3
TSS	17.8	8.9

[9,900 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	2.8	1.2
TSS	6.1	2.2

Woven Fabric Finishing Subcategory—Complex Processing

[Less than 11,600 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	6.6	3.3
TSS	17.8	8.9

[11,600 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	4.7	2.0
TSS	7.7	2.8

Woven Fabric Finishing Subcategory—Desizing

[Less than 15,200 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	6.6	3.3
TSS	17.8	8.9

[15,200 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	6.4	2.5
TSS	11.5	4.1

Knit Fabric Finishing Subcategory—Simple Processing

[Less than 11,300 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	5.0	2.5
TSS	21.8	10.9

[11,300 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	4.2	1.8
TSS	8.1	2.9

Knit Fabric Finishing Subcategory—Complex Processing

[Less than 13,100 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	5.0	2.5
TSS	21.8	10.9

[13,100 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	5.0	2.5
TSS	12.1	4.4

¹This value is equal to BPT. While the value calculated from the current data base would be 5.9, it is the Agency's policy that BCT will not be less stringent than the BPT value promulgated in 1974. EPA solicits comment on this approach.

Knit Fabric Finishing Subcategory—Hosiery Products

[Less than 7,600 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	5.0	2.5
TSS	21.8	10.9

[7,600 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	2.7	1.1
TSS	5.2	1.9

Carpet Finishing Subcategory

[Less than 12,200 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	7.8	3.9
TSS	11.0	5.5

[12,200 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	3.9	1.6
TSS	6.0	2.1

Stock & Yarn Finishing Subcategory

[Less than 12,700 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	6.8	3.4
TSS	17.4	8.7

[12,700 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	2.3	1.0
TSS	4.8	1.7

Nonwoven Manufacturing Subcategory

[Less than 37,900 kkg/yr total production]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	4.5	1.8
TSS	9.4	3.4

[37,900 kkg/yr total production or greater]

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	3.4	1.4
TSS	5.2	1.8

Felted Fabric Processing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD	17.0	6.8
TSS	45.9	16.6

Table 7—BAT Effluent Limitations

Wool Scouring Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	28.4	14.2
TSS	5.3	1.9
Total Phenols	0.002	0.001

Wool Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	39.3	19.5
TSS	9.7	3.7
Total Phenols	0.070	0.021

Woven Fabric Finishing Subcategory—Simply Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	38.4	19.2
TSS	6.1	2.2
Total Phenols	0.012	0.004

Woven Fabric Finishing Subcategory—Complex Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	59.7	29.9
TSS	7.7	2.8
Total Phenols	0.013	0.004

Woven Fabric Finishing Subcategory—Desizing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	55.1	27.5
TSS	11.5	4.1
Total Phenols	0.010	0.003

Knit Fabric Finishing Subcategory—Simple Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	57.6	28.8
TSS	8.1	2.9
Total Phenols	0.020	0.006

Knit Fabric Finishing Subcategory—Complex Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	60.0	30.0
TSS	12.1	4.4
Total Phenols	0.045	0.015

† These values are equal to BPT. While the values calculated from the current data base would be 70.0 for a daily maximum and 35.1 for a 30 day average, it is the Agency's policy that BAT will not be less stringent than the BPT value promulgated in 1974. EPA solicits comment on this approach.

Knit Fabric Finishing Subcategory—Hosiery Products

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	36.8	18.4
TSS	5.2	1.9
Total Phenols	0.013	0.994

Carpet Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	27.1	13.6
TSS	6.0	2.1
Total Phenols	0.020	0.007

Stock & Yarn Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
COD	29.6	14.8
TSS	4.8	1.7
Total Phenols	0.021	0.007

Nonwoven Manufacturing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
COD.....	23.2	11.6
TSS.....	5.2	1.8
Total Phenols.....	0.017	0.006

Felted Fabric Processing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
COD.....	109.8	54.9
TSS.....	45.9	16.6
Total Phenols.....	0.081	0.026

Table 8—NSPS Effluent Limitations

Wool Scouring Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of raw grease wool	
BOD.....	1.2	0.5
COD.....	28.4	14.2
TSS.....	5.3	1.9
Total Phenols.....	0.002	0.001

Wool Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	6.1	2.4
COD.....	39.3	19.5
TSS.....	9.7	3.7
Total Phenols.....	0.070	0.021

Low Water Use Processing Subcategory—General Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	0.40	0.16
COD.....	12.8	11.4
TSS.....	0.57	0.2

Low Water Use Processing Subcategory—Water Jet Weaving

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	6.9	2.8
COD.....	18.8	9.4
TSS.....	4.7	1.7

Woven Fabric Finishing Subcategory—Simple Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	1.5	0.6
COD.....	20.3	10.1
TSS.....	2.2	0.8
Total Phenols.....	0.008	0.002

Woven Fabric Finishing Subcategory—Complex Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	2.5	1.0
COD.....	31.6	15.8
TSS.....	2.8	1.0
Total Phenols.....	0.009	0.003

Woven Fabric Finishing Subcategory—Desizing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	3.4	1.4
COD.....	29.1	14.6
TSS.....	4.2	1.5
Total Phenols.....	0.006	0.002

Knit Fabric Finishing Subcategory—Simple Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	2.2	0.9
COD.....	30.5	15.3
TSS.....	2.9	1.1
Total Phenols.....	0.015	0.005

Knit Fabric Finishing Subcategory—Complex Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	3.2	1.2
COD.....	37.5	18.5
TSS.....	4.4.9	1.6
Total Phenols.....	0.033	0.010

Knit Fabric Finishing Subcategory—Hosiery Products

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	1.4	0.6
COD.....	19.5	9.8
TSS.....	1.9	0.7
Total Phenols.....	0.010	0.003

Carpet Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	2.1	0.8
COD.....	14.4	7.2
TSS.....	2.2	0.8
Total Phenols.....	0.014	0.005

Stock & Yarn Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	1.3	0.5
COD.....	15.7	7.8
TSS.....	1.7	0.7
Total Phenols.....	0.015	0.005

Nonwoven Manufacturing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or lb/1,000 lb) of product	
BOD.....	1.8	0.7
COD.....	12.3	6.2
TSS.....	1.9	0.7
Total Phenols.....	0.012	0.004

¹ These values are equal to BPT. While the values calculated from the current data base would be 3.4 for a daily maximum and 1.7 for a 30 day average, it is the Agency's policy that NSPS will not be less stringent than the BPT value promulgated in 1974. EPA solicits comment on this approach.

Felted Fabric Processing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD.....	6.8	2.8
COD.....	27.4	13.6
TSS.....	6.8	2.6
Total Phenols.....	0.049	0.015

Extensive analyses performed on the data, before and after the recent data acquisition, demonstrated that the differences among the proposed and newly derived limitations and standards are primarily due to the expanded data base now available and changes in subcategorization, and not to the revised statistical methodology.

IV. Toxic Metals Effluent Limitations

EPA proposed BAT effluent limitations, NSPS, PSES and PSNS for three toxic metals—copper, chromium and zinc. (See 45 FR 62230-62241). EPA based the proposed limitations and standards on performance data of chemical coagulation/flocculation and sedimentation (commonly referred to as chemical coagulation) from the electroplating industry. Since the proposal, the data base for calculating the toxic metals effluent limitations and standards has been greatly expanded. EPA is making these new data available for public inspection and comment. These new data will be the basis for calculating final toxic metals effluent limitations and standards. The final limitations and standards will change from the proposed limitations and standards. A detailed discussion of the new data, limitations, and standards follows below. The public is urged to review the new data, limitations, and standards and submit comments on EPA's proposal to base final toxic metals effluent limitations and standards on these new data.

A. New Data Base

As explained above, the proposed toxic metals effluent limitations and standards were based upon the performance of chemical coagulation in the electroplating industry. Substantial additional data have become available from the BAT studies for metal finishing (which now includes electroplating), coil coating, porcelain enameling, battery manufacturing, and copper forming industries. These data show that

chemical coagulation will achieve the following concentrations:

Table 9

Pollutant	Concentrations, mg/l	
	30-day average	Daily maximum
Copper.....	0.8	2.0
Chromium.....	0.7	1.8
Zinc.....	0.7	1.5

Based upon these revised toxic metals data and comments submitted in response to the proposed regulation, the Agency is reexamining its proposed toxic metals effluent limitations and standards for textile mills. EPA intends to revise the limitations and standards for copper, chromium, and zinc in the final regulation based upon the performance of chemical coagulation in reducing toxic metals in the metal finishing, coil coating, porcelain enameling, battery manufacturing, and copper forming industries.

There are a number of reasons supporting EPA's use of chemical coagulation performance data in other industries as a basis for deriving effluent limitations and standards for the textile industry. First, the performance of chemical coagulation has been demonstrated as an effective treatment technology in the textile industry. Pilot plant data demonstrate that chemical coagulation can be effectively installed as a treatment technology for textile mill wastewater. In the proposal, EPA selected chemical coagulation (in conjunction with multimedia filtration at most existing woolen mills and all new sources) as the control option for meeting proposed NSPS, PSES and PSNS for all pollutants in eight subcategories and for meeting BAT limitations in the Wool Finishing Subcategory and the Hosiery Products Subdivision of the Knit Fabric Finishing Subcategory. Second, EPA is relying on treatment data from these industries for the same toxic metals—copper, chromium and zinc—as will be controlled in the textile industry. Third, the concentrations of the three metals in the untreated wastewater of the textile industry do not exceed 10 mg/l. This is within the range observed in the other industries. Finally, EPA does not believe that any differences in the characteristics of the wastewater from textile mills as compared to wastewater of the other industries will alter the performance of chemical coagulation in removing toxic metals. Taking the above factors into consideration, EPA believes, based upon its best engineering judgment, that the limitations are

achievable in the textile industry. These factors support reliance on the chemical coagulation performance data for deriving textile effluent limitations.

B. Effluent Limitations and Standards

EPA has derived toxic metals for BAT effluent limitations, NSPS, PSES and PSNS based upon the performance of chemical coagulation in the above named industries. The limitations and standards were derived by converting the concentration performance data in Table 9 to production-based mass limitations and standards. This conversion uses the attainable concentrations in Table 9 multiplied by the median wastewater discharge rate per ton of production shown in Table 5.

In Table 10 are the BAT effluent limitations, NSPS, PSES and PSNS calculated from the performance data for chemical coagulation in the metal finishing, coil coating, porcelain enameling, battery manufacturing and copper forming industries.

Table 10—BAT, NSPS and Mass Limitations for PSES and PSNS

Wool Scouring Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.02	0.009
Total chromium.....	0.02	0.008
Total zinc.....	0.02	0.008

Wool Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.61	0.24
Total chromium.....	0.55	0.21
Total zinc.....	0.46	0.21

Woven Fabric Finishing Subcategory—Simple Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.15	0.06
Total chromium.....	0.14	0.05
Total zinc.....	0.12	0.05

*Woven Fabric Finishing Subcategory—
Complex Processing*

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.20	0.08
Total chromium.....	0.18	0.07
Total zinc.....	0.15	0.07

*Woven Fabric Finishing Subcategory—
Desizing*

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.21	0.09
Total chromium.....	0.19	0.08
Total zinc.....	0.16	0.08

Knit Fabric Finishing Subcategory—Simple Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.24	0.09
Total chromium.....	0.21	0.08
Total zinc.....	0.18	0.08

Knit Fabric Finishing Subcategory—Complex Processing

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.25	0.10
Total chromium.....	0.22	0.09
Total zinc.....	0.18	0.09

Knit Fabric Finishing Subcategory—Hosiery Products

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.15	0.06
Total chromium.....	0.14	0.05
Total zinc.....	0.11	0.05

Carpet Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.09	0.04
Total chromium.....	0.08	0.03
Total zinc.....	0.07	0.03

Stock and Yarn Finishing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.19	0.08
Total chromium.....	0.17	0.07
Total zinc.....	0.15	0.07

Nonwoven Manufacturing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.08	0.03
Total chromium.....	0.07	0.03
Total zinc.....	0.06	0.03

Felted Fabric Processing Subcategory

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	0.43	0.17
Total chromium.....	0.38	0.15
Total zinc.....	0.32	0.15

PSES and PSNS—All Subcategories

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days
Total copper.....	2.0	0.8
Total chromium.....	1.8	0.7
Total zinc.....	1.5	0.7

As explained above, EPA derived these effluent limitations and standards by assuming operation of chemical coagulation. EPA believes that existing textile pilot plant performance data (See Sections V and VII of the *Development Document*) and the performance data from the other industries support its decision that textile mills will be able to meet the above limitations and

standards with the proper operation of chemical coagulation.

EPA's decision also is supported by limited textile pilot plant data indicating that biological treatment, chemical coagulation and multimedia filtration can meet or exceed the metals removal performance in the other industries. EPA expects that many dischargers will install multimedia filtration to meet BAT limitations and NSPS for total suspended solids, chemical oxygen demand and total phenols and NSPS and BCT (at large plants) limitations for biochemical oxygen demand. EPA, however, presently plans to base the effluent limitations and standards for copper, chromium and zinc on the performance of chemical coagulation alone since the Agency does not have sufficient data from the textile industry to quantify the improvement in metals removal from multimedia filtration. Nor does EPA have sufficient data in other industries on which to judge the performance of multimedia filtration in removing toxic metals from textile wastewater.

V. Estimate of Technology Costs

In the process of reexamining effluent limitations and standards for toxic metals removal, EPA also is considering changes in certain assumptions in the estimate of the cost of the selected technologies. These changes are not expected to increase the economic impact projected for the proposed regulation. In fact, the new estimates of technology costs may reduce the impact of the final regulation. EPA is soliciting comments on each of these possible changes. The economic analysis of the proposed regulation was published in November 1979. Additional copies of this analysis are available from Ms. Mary Ives, EPA Office of Analysis and Evaluation, (WH-586), 401 M St., S.W., Washington, D.C. 20460, Telephone No. (202) 426-2617.

A. DAF Technology for Wool Scouring

In the proposal, EPA assumed the use of chemical coagulation (without sedimentation) and dissolved air flotation (DAF) for meeting BCT and BAT limitations and NSPS for the Wool Scouring Subcategory. EPA is considering changing this assumption so that the technology of choice for meeting the effluent limitations and standards (for all pollutants except toxic metals) in the Wool Scouring Subcategory would be multimedia filtration. This change would be made in response to comments questioning the capability of DAF to achieve the proposed wool scouring limitations and standards. Pilot plant studies have demonstrated the effective

performance of multimedia filtration following biological treatment (BPT). EPA's assumption that multimedia filtration rather than DAF would be installed will result in a decrease in costs for compliance with the regulation.

EPA had originally identified DAF as a preferable treatment technology when high concentrations of oil and grease were present. Facilities with substantial oil and grease in the effluent following biological treatment may find that DAF is a more effective method of attaining the BCT and BAT limitations and NSPS.

B. Substitution to Comply with BAT or NSPS

In assessing the economic impact of compliance with the BAT effluent limitations and NSPS for toxic metals, EPA assumed that mills in Subparts A and D through H (wool scouring and nonwoolen mills) would have to install multimedia filtration.

The Agency believes that most mills in the wool scouring and nonwoolen subcategories will be able to substitute dyes, functional finishes, and other raw materials with materials not containing copper, chromium or zinc, thereby achieving the effluent limitations and standards discussed above at no additional cost. Therefore, the Agency is considering, for purposes of the final economic analysis, adoption of the assumption that wool scouring and nonwoolen textile mills will be able to meet toxic metals effluent limitations and standards at no increased cost. This assumption is supported by wastewater data which show that the untreated wastewater at only seven of 48 wool scouring and nonwoolen mills exceeded the concentrations attainable by chemical coagulation. One mill was in the Wool Scouring Subcategory, five mills were in the Woven Fabric Finishing Subcategory-Desizing and one mill was in the Knit Fabric Finishing Subcategory-Complex Processing. However, other mills in these subcategories have demonstrated the feasibility of substitution for copper, chromium, and zinc. The untreated wastewater at two other Wool Scouring Subcategory mills and eight other mills in the Woven Fabric Finishing Subcategory-Desizing and two other mills in the Knit Fabric Finishing Subcategory-Complex Processing did not exceed the effluent limitations and standards discussed above.

While EPA would use the substitution option for the economic analysis, EPA recognizes that there may be a few mills that will choose not to substitute dyes, functional finishes, or other raw materials. Therefore, in establishing the effluent limitations and standards for

copper, chromium, and zinc, EPA presently intends to calculate those limitations and standards based upon installation of chemical coagulation and performance data discussed above. These limitations and standards would ensure reduction of toxic metals in those waste streams where they may be present. EPA invites comment on this approach.

C. Substitution to Comply With PSES and PSNS

While EPA derived PSES and PSNS based upon the performance of chemical coagulation, EPA will assume for purposes of the economic analysis that only indirect dischargers in the Wool Finishing and Felted Fabric Processing Subcategories will install the treatment technology. For other mills, as discussed above, EPA will assume that there will be no economic impact for PSES and PSNS. Replacement of dyes, functional finishes, and other raw materials containing copper, chromium and zinc will enable wool scouring and nonwoolen mills to meet these standards without installation of any treatment technology.

Although EPA will assume that Wool Finishing and Felted Fabric Processing Subcategory mills will install chemical coagulation, for the purposes of the economic analysis, EPA will assume new source indirect Wool Finishing and Felted Fabric Processing Subcategory discharges will attain compliance by segregating all wastewaters potentially containing toxic metals. This smaller flow of more concentrated wastewater could be treated with chemical coagulation at a cost less than chemical coagulation for the unsegregated wastewater flow. The cost of wastewater segregation at existing sources would make this option less economically attractive for existing facilities. EPA will assume reduced costs as a result of segregation only for new source Wool Finishing and Felted Fabric Processing Subcategory indirect dischargers.

Solicitation of Comments

EPA invites and encourages public participation in its rulemaking process. EPA is soliciting comment on each of the subjects addressed in this notice. Any comments not related to the specific information contained in this notice will not be appropriate. The Agency is allowing 45 days from the publication of this notice for submission of comments. Therefore, comments should be submitted to James R. Berlow at the above address no later than March 13, 1981.

Dated: January 16, 1981.

Eckardt C. Beck,

Assistant Administrator for Water and Waste Management.

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FEDERAL MARITIME COMMISSION

46 CFR Part 537

[General Order 18 Revised; Docket No. 81-4]

Exclusion of Certain Routine Rate Actions From Reporting Requirement

AGENCY: Federal Maritime Commission.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: Minutes of conference and rate agreement meetings pertain to certain "routine rate actions" would be exempt from the reporting requirements prescribed in 46 CFR 537.3. Experience has shown that such reporting is redundant and of little use as a surveillance tool. This exemption will lessen regulatory requirements.

DATE: Comments due by March 30, 1981.

ADDRESSES: Comments (original and 15 copies) to: Secretary, Federal Maritime Commission, 1100 L Street, N.W., Room 11101; Washington, D.C. 20573.

FOR FURTHER INFORMATION CONTACT: Francis C. Hurney, (202) 523-5735.

SUPPLEMENTARY INFORMATION: The Federal Maritime Commission is considering the revision of 46 C.F.R. 537.3 to exclude from the reporting requirement of that rule minutes of conference or rate agreement meetings dealing with certain routine rate actions.

Part 537 of the Commission's Rules (46 CFR Part 537, General Order 18) was adopted in order to provide the Commission with meaningful reports on the deliberations and activities of steamship conferences and other rate-fixing bodies in order to insure that the parties to such agreements are at all times complying with the terms of their approved agreements and the requirements of the Shipping Act, 1916, and that their actual operations are not being carried out in such a way as to be detrimental to the commerce of the United States or contrary to the public interest. Section 537.3 specifies that:

(a) Within 60 days of the effective date of this part, the parties to each approved conference agreement, agreement between or among conferences, or agreements whereby the parties are authorized to fix rates (except two-party rate-fixing agreements and except leases, licenses, assignments or other agreements of similar character for the use of marine terminal property or facilities) shall, through a designated official, file with the