UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF WATER

MEMORANDUM

SUBJECT: Questions and Answers Regarding the OCPSF Effluent Limitations Guidelines

FROM: James R. Elder, Director
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TO: Regional Water Management Division Directors
NPDES State Directors

The final rule establishing effluent limitations guidelines, pretreatment standards, and new source performance standards for the organic chemicals, plastics, and synthetic fibers (OCPSF) point source category (the "guideline") was promulgated on November 5, 1987 and became effective on December 21, 1987. There has been and will be increased concern over the implementation schedules and permit requirements. The purpose of this memorandum is to provide you a list of questions and answers (Q's & A's, as attached) which are most frequently asked by permit writers and permittees regarding the guideline. The areas of concern which are covered by the Q's & A's are given below:

Question No.	
1 - 3	Applicability of the Guideline
4 - 6	Calculation of Permit Limits
7, 8	Monitoring Requirements
9 - 11	Promulgation and Implementation of the Guidelines
12	Disparity of Limitations between Subparts I and J
13	Whole-effluent Toxicity Testing of OCPSF Effluent
14	Metals in OCPSF Streams
15 - 18	Fundamentally Different Factors (FDF) Variance Requests

By providing these answers, we hope many issues and challenges will be eliminated before the permits are drafted.

If you have any questions or comments, please contact me or James Gallup, Chief of the Technical Support Branch at (202) 475-9541.

Attachment

QUESTIONS AND ANSWERS (Q'S & A'S) REGARDING

THE ORGANIC CHEMICALS, PLASTICS, AND SYNTHETIC FIBERS (OCPSF) EFFLUENT LIMITATIONS GUIDELINES

QUESTIONS REGARDING THE APPLICABILITY OF THE GUIDELINE

Question 1 - Do the OCPSF pretreatment requirements apply to discharges from compounding and formulation processes?

Answer:

No. The OCPSF pretreatment standards do not apply to wastewater discharges from compounding and formulation processes. However, if such wastes mix with regulated OCPSF wastewater prior to treatment, the combined wastestream formula (CWF) would allocate allowances for any unregulated wastestreams. In circumstances where there are no regulated wastestreams present, pollutants may be present in the discharge from formulation processes in amounts that warrant control under local limits.

Question 2 - Are auxiliary establishments primarily engaged in performing support services such as research and development activities exempt from the OCPSF requirements?

Answer:

OCPSF facilities which engage in support service activities such as research and development, pilot plant, technical services, and laboratory bench scale operations are subject to the OCPSF requirements *if* such operations are conducted in conjunction with and related to existing OCPSF manufacturing activities at the plant site [40 CFR 414.11(b)]. However, if the auxiliary establishment is located at a physically separate site from the OCPSF manufacturing facility, then the OCPSF requirements would not be applicable as long as the product manufactured at this auxiliary site is not sold. That is, the sale of the product would make the auxiliarysite's operation a commercial manufacturing facility subject to the OCPSF regulations.

Question 3 - At a facility where the primary production activity is not regulated by the OCPSF pretreatment requirements, would a wastestream resulting from the production of small quantities of intermittently produced specialty chemicals subject the facility to the OCPSF pretreatment requirements?

Answer:

The OCPSF Pretreatment Regulations provide no exemption for intermittently produced, small quantity production. In the event that a facility's primary production activity is not regulated by the OCPSF requirements but an auxiliary product, such as a specialty chemical is manufactured which does fall under the OCPSF requirements, and both wastestreams are mixed prior to treatment, then the combined wastestream formula applies. However, for facilities that combine regulated and nonregulated wastestreams after treatment but prior to the monitoring point (usually at the sewer connection to the public sanitary sewer), a flow weighted average (FWA) or more stringent approach must be used to adjust Categorical Pretreatment Standards. In the preamble to the June 12, 1986 proposed rules (51 FR 21462), EPA clarified when CWF and FWA must be used.

QUESTIONS REGARDING THE CALCULATION OF PERMIT LIMITS

Question 4 - How is "process wastewater" defined in the guideline?

Answer:

Process wastewater has been defined in 40 CFR 401.11(q) as "any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product." The Development Document for Effluent Limitations Guidelines and Standards for the OCPSF Point Source Category further describes, "OCPSF process wastewater discharges are defined as discharges from all establishments or portions of establishments that manufacture the products or product groups listed in the applicability sections of the regulation and also in Appendix III-A of this document, and are included within the following ... SIC major groups: 2865, 2869, 2821, 2823, 2824..." (p. III-20). Please refer to Section V.A. (p. V-1) of the Development Document for examples of process wastewater. Noncontact cooling waters, utility wastewaters, general site surface runoff, ground waters, and other nonprocess waters generated on site are specifically excluded from the definition of process wastewater discharges.

Question 5 - What procedure will be followed for determining permit limitations for plants which fall within more than one of the guideline subcategories?

Answer:

For best practicable control technology currently available (BPT) limits, a facility whose production activities fall within two or more subcategories should follow a procedure pursuant to Section VI.A.1 (p. 42533) of the preamble of the OCPSF regulations. The preamble states, "[i]n applying the limitations set forth in the regulation, the permit writer will use what is essentially a building-block approach that takes into consideration applicable subcategory characteristics and the proportion of production quantities within each subcategory at the plant. Production characteristics are reflected explicitly in the plant's limitations through the use of this approach." Section IX.E (p. IX-10) of the Development Document further describes the procedure as follows (assuming that all subcategorical process wastewaters are discharged into the same outfall): First, calculate the subcategory proportion by dividing the annual production rate (lbs/yr) for each subcategorical activity by the facility's total OCPSF production rate. Next, multiply each subcategory proportion by the BPT concentration limits to get the weighted concentration for each subcategory. Then, add all the weighted concentrations to get the total OCPSF concentration limit. Finally, calculate the OCPSF mass limits by multiplying the total OCPSF concentration limits by the facility's total OCPSF process wastewater flow.

In some cases, non-OCPSF process streams and/or other nonprocess streams contributing to the same outfall may require additional concentration limits based on the permit writer's best professional judgment (BPJ). A flow-weighted approach should then be used to calculate the final concentration limit on the permit. The final mass limit on the permit can be calculated by multiplying the final concentration limit by the total flow discharged from that outfall.

For best available technology economically achievable (BAT) limits, the procedure for calculating the mass limits in Subparts I and J of the OCPSF rules should be followed whether a facility falls into a single subcategory or multiple subcategories.

Question 6 - How does the permit writer determine the proper "flow" figure to use in calculating permit limits?

Answer:

EPA believes, in general, that the long-term average process wastewater flow taken from a representative production year is the appropriate value to use for the mass limits calculation. It would be within the permit writer's discretion to consider

various data in determining a proper long-term average flow for each facility, e.g., the highest monthly average flow during the past twelve (12) months or the highest yearly mean of the twelve monthly average flows during the past five (5) years. The selected flow will then be used to calculate both the daily maximum and monthly average mass limits.

In cases where the process wastewater flow claimed by the industry may be excessive, the permit writer may develop a more appropriate process wastewater flow for use in computing the mass limits. Significant factors, such as the component flows, the facility's water conservation practices, and the barometric condenser use at the process level, should all be considered in developing the appropriate process wastewater flow. Section XIV.A (p. 42566) of the preamble to the regulation has a detailed discussion on this matter.

In situations where flow varies significantly from day-to-day, the permit writer may also take this into consideration. In some special instances, the permit writer may find that a tiered permit is warranted due to the variability of production and resulting changes in flow conditions. In these cases, the permit writer should use discretion to develop a case-by-case determination with appropriate supporting documentation and rationale. In any event, the permittee is responsible for demonstrating to the permit writer the need for special consideration of flow variations in the permit.

QUESTIONS REGARDING THE MONITORING REQUIREMENTS

Question 7 - What will be the required monitoring frequency for toxic pollutants regulated by the OCPSF guidelines that are not expected to be present at levels of concern?

Answer:

The NPDES regulation (40 CFR 122.48(b)) requires that each permit specify monitoring frequency sufficient to yield data which are representative of the monitored activity. In establishing monitoring frequencies, many factors are considered by the permit writer. The monitoring scenario assumed for cost estimation during the development of the effluent limitations guidelines is one of the factors most commonly considered by the permit writer. Other typical factors include design capacity of treatment facility, type of treatment method used, significance of the pollutants, and nature and sensitivity of the water quality standards of the receiving water. For OCPSF facilities, as for all other facilities, EPA has decided that the appropriate monitoring scheme is best determined on a case-by-case basis. EPA refrains from setting inflexible monitoring frequencies in

national regulations to allow permit writers to establish frequencies that are appropriately tailored to the facility. The minimum monitoring frequency for toxic pollutants which are not expected to be present at levels of concern may be monthly or quarterly, but in no case shall it be less than once per year as required in 40 CFR 122.44(i)(2) for direct dischargers. For indirect discharges, the minimum monitoring and reporting frequency is twice per year as prescribed in 40 CFR 403.12(e)(1). Section X.4 (pp. 42557-8) of the preamble to the regulation has a detailed discussion on this matter.

Question 8 - Does the NPDES "boilerplate" language requirements (40 CFR 122.41(a)(1)) trigger the Duty to Comply with all OCPSF toxic limits even if the permit is not modified to incorporate the new limits?

Answer:

No. The OCPSF regulations do not include "Toxic Pollutant Effluent Standards and Prohibitions" as prescribed in 40 CFR Part 129, Subpart A. Consequently, the "boilerplate" language does not encompass the new OCPSF toxic regulations. The limits for toxic pollutants in the OCPSF regulations must be included in permits for them to become enforceable.

QUESTIONS REGARDING THE PROMULGATION AND IMPLEMENTATION OF THE GUIDELINES

Question 9 - Will best conventional pollutant control technology (BCT) be promulgated in the future and if so, will NSPS be made more stringent in the future?

Answer:

All BCT's are reserved in the final regulation as described in III.A.3 (p. 42525) of the preamble. NSPS for conventional pollutants (BOD5, TSS, and pH) are presently equivalent to the limits established for BPT. The States may develop BCT limits more stringent than BPT by using BPJ at this time. When a BCT analysis is done in the future, if it is determined that BCT limits should be more stringent than BPT, then the technology basis for NSPS limits will be re-assessed.

Question 10 - Will the dischargers be expected to begin purchasing and installing treatment before the final permit limits are determined?

Answer:

The statutory deadline for direct dischargers to comply with BAT is March 31, 1989; the deadline for indirect dischargers to comply with pretreatment standards for existing sources (PSES) is November 5, 1990. EPA believes that dischargers should begin now to conduct studies to determine whether additional treatment is necessary and, if so, what additional treatment should be considered. In many cases, the decision to purchase and install treatment equipment can be made after these studies and dischargers should proceed with purchasing and installing treatment equipment whether their permits contain final limits or not.

If some direct dischargers are unable to determine final permit limits, then they should meet with the permitting authority to determine final permit limits and reasonable compliance schedules, thereby avoiding delays in purchasing and installing treatment equipment.

EPA's pretreatment program requires OCPSF indirect dischargers to prepare baseline monitoring reports within 180 days after the effective date of the pretreatment standards that assess compliance and provide detailed schedules showing major events leading to construction and operation of additional treatment. If an indirect discharger has a question about their applicable pretreatment standards, they should consult their control authority.

Question 11 - Are Permitting Authorities to be given any specific deadlines for reopening the non-expiring OCPSF permits to incorporate the new guideline?

Answer:

EPA is preparing guidance which urges permitting authorities to accelerate compliance with the new guideline for OCPSF facilities. The guidance would assist permitting authorities in determining when and how to implement the guideline using all available authorities and permitting tools. One approach would be to reopen the permit and incorporate new guidelines pursuant to the reopener clause or the State's general authority. Other possible approaches are to notify OCPSF facilities that immediate compliance will be expected upon reissuance of the permit, and to use section 308 authority to request the submission of compliance plans.

EPA recently conducted a compliance assessment in selected Regions to estimate the number of OCPSF permits that can be reopened and the number of OCPSF facilities which need additional treatment for compliance with the guidelines. The assessment indicated that many existing permits have either specific reopener clauses or the permitting State has a general regulation to reopen the permit upon promulgation of new effluent limitations guidelines. The assessment also revealed that the majority of OCPSF facilities currently discharge pollutants at levels which exceed the new BPT and/or BAT guidelines.

QUESTIONS REGARDING THE DISPARITY OF LIMITATIONS BETWEEN SUBPARTS I AND J

Question 12 - Why are there a number of BAT and NSPS limitations for toxic pollutants, e.g., nitrobenzene, which allow higher effluent concentrations for dischargers that do not use end-of-pipe (Non-EOP, Subpart J) biological treatment than those using end-of-pipe (EOP, Subpart I) biological treatment?

Answer:

In developing technology-based guidelines for BAT and NSPS, EPA used performance data that properly reflected the type of treatment used, based upon the facilities' particular wastewater characteristics. In the case of nitrobenzene, the BAT limits for the EOP biological treatment subcategory were derived from a data base of four plants using the combination of steam stripping and activated carbon adsorption plus EOP biological treatment, whereas BAT limits for the Non-EOP biological treatment were from a data base of two plants using the combination of steam stripping and activated carbon adsorption alone. (See Tables VII-45 & 64 of the final Development Document.) These two sets of data were evaluated independently and resulted in the different limitations for these two subparts. Therefore, the difference between nitrobenzene limits in Subparts I and J was an inevitable result of this development procedure for technology-based limitations. Please refer to VI.C.4.d, pp. 42543-4, of the preamble for a general discussion of this particular issue.

The facilities in the EOP biological treatment subcategory are the ones which have installed, or will install, end-of-pipe biological treatment to comply with BPT limits. The facilities in the Non-EOP biological treatment subcategory are the ones with low enough levels of BOD5 in their wastestreams which do not need end-of-pipe biological treatment to comply with BPT limits. (See p. 42538, VI.C.1 & 2 of the preamble.) In the future, those plants that have lower levels of BOD5 (and no end-of-pipe biological treatment) will most likely choose to manufacture new chemicals that will also have lower BOD5 levels and require no

end-of-pipe biological treatment. However, a plant may choose to manufacture a new product or products as a result of the higher effluent limits in the Non-EOP biological treatment subcategory for selected pollutants. If the plant can comply with its permit for all limited pollutant parameters, it is the plant's prerogative to manufacture the new product(s).

Furthermore, the BAT limitations in these two subcategories are technology-based. If a State feels that certain toxic limits, e.g., nitrobenzene, are too lenient, more stringent limitations based on State Water Quality Standards or more stringent provisions of the State law can be imposed.

QUESTIONS REGARDING WHOLE-EFFLUENT TOXICITY TESTING OF OCPSF EFFLUENT

Question 13 - Should most OCPSF permits contain whole-effluent toxicity controls?

Answer:

Yes. Under sections 308 and 402 of the Clean Water Act, EPA or a State may require permittees to provide chemical, toxicity, and in-stream biological data necessary to assure compliance with water quality standards. EPA's Policy for the Development of Water Quality-based Permit Limitations for Toxic Pollutants (49 FR 9016, March 9, 1984) calls for the use of "an integrated strategy consisting of both biological and chemical methods to address toxic and nonconventional pollutants from industrial ... sources." The Policy specifies, "[w]here there is a significant likelihood of toxic effects to biota in the receiving water, EPA and the States may impose permit limits on effluent toxicity...." As we have stated in the memo of February 8, 1988, discharges from OCPSF facilities often contain an exceptionally wide variety of pollutants. All potentially toxic pollutants discharged from OCPSF facilities cannot be inexpensively identified by chemical methods, but it is feasible to examine the whole-effluent toxicity and instream impacts using acute and/or chronic toxicity testing rather than attempt to identify and limit all toxic pollutants. For the reasons given above, EPA anticipates that whole-effluent toxicity controls, including acute or chronic toxicity limits and/or biomonitoring requirements, will be needed in most cases for OCPSF facilities. Acute or chronic toxicity limits or monitoring requirements are dependent upon available dilution and species sensitivity. Toxicity limits may be imposed for the facilities at the discretion of the permit writer on a case-by-case basis.

QUESTIONS REGARDING METALS IN OCPSF STREAMS

Question 14 - Are complexed metal-bearing wastestreams exempt from the standards for metals only, or is the wastestream also exempt from the organic and cyanide limits?

Answer:

The exemption for complexed metals in 40 CFR 414.11(f) refers to the exclusion of the standards for metals only. The exclusion applies only for the metals listed in Appendix B as complexed for the product/process in question. In addition, the wastestream is not exempt with regard to toxic organics and cyanide requirements.

QUESTIONS REGARDING THE FUNDAMENTALLY DIFFERENT FACTORS (FDF) VARIANCE REQUESTS

Question 15 - What will be the effect of imposing OCPSF limits on a permittee which has filed an FDF variance request?

Answer:

Section 301(n)(6) states that "an application for an alternative requirement under this subsection [i.e., FDF] shall not stay the applicant's obligation to comply with the effluent limitation guideline or categorical pretreatment standard which is the subject of the application." This provision applies to the FDF variance requests for BAT, BCT, and PSES. In addition, the NPDES regulation does not provide for staying the applicant's obligation to comply with the effluent limitation guideline for BPT. The guideline regulation requires compliance with PSES by November 5, 1990, while BPT and BAT limits are enforceable only when they are incorporated in NPDES permits. Permitting authorities can use enforcement discretion, when appropriate, for the permittees which have filed FDF variance requests and are not in compliance with their permit requirements.

Question 16 - What impact will section 301(n)(2) of the Clean Water Act, which requires submission of a request within 180 days of the date of establishment or revision of a limitation, have on FDF filing deadlines?

Answer:

The existing State NPDES regulations require submission of a BPT, BAT, and/or BCT FDF variance request by the close of the comment period on the draft permit which incorporates the

guideline-based limitations at issue. At this time, the existing EPA NPDES regulations also contain this requirement. The existing EPA general pretreatment regulations require submission of a FDF variance request within 180 days of the effective date of the standard from which relief is being requested or within 30 days after a categorical determination.

As indicated in the memo of February 8, 1988, EPA will consider BAT FDF variance requests submitted by OCPSF facilities to be timely if the request is submitted to the NPDES permitting authority by May 3, 1988. This requirement is based specifically on the language of section 301(n)(2). The conference report indicated that the FDF variance provisions were to be self-implementing. 132 Cong. Rec. H10567 (daily edition October 15, 1986). Note, however, our regulations at 40 CFR 123.62 provide a process for revisions to conform State programs to federal requirements and references as one such instance when controlling federal statutory authority is modified or supplemented. The preamble to the OCPSF regulation also noted that the statute overrode existing EPA FDF regulations to the extent there were any inconsistencies. 52 Fed. Reg. 42566 (November 5, 1987). EPA will be changing the NPDES (and general pretreatment) regulations to conform them to the statutory requirements. To the extent that the State NPDES regulations would provide any filing deadline which would be after May 3, 1988, the more stringent federal provision, section 301(n)(2), which requires submission no later than May 3, 1988, would control.

<u>Question 17</u> - Why is there an apparent inconsistency in filing deadlines between BPT and BAT/PSES and what is the filing deadline for BPT FDF variance requests?

Answer:

Section 301(n), on its face, only applies to BAT, BCT, and PSES FDF variance requests. EPA will continue to consider and evaluate BPT FDF variance requests in accordance with the existing NPDES regulations, since there is no superseding statutory provision. Accordingly, BPT FDF variance requests must be made by the close of the public comment period on the draft permit. EPA intends to eventually change the regulations for BPT FDFs to make them consistent with section 301(n). Moreover, EPA had strongly encouraged that BPT FDF variance requests from the OCPSF guidelines be submitted along with BAT and PSES variance requests on or before May 3, 1988.

<u>Question 18</u> - Is the language in 40 CFR §125.31(a)(1) which requires a request for relief from a "national limit which is applied in the permit...." inconsistent with the existing regulatory and/or statutory filing deadlines?

Answer:

The provision in 40 CFR §125.31(a)(1) is one of the decision criteria that is used in deciding NPDES FDF variance requests, not an application requirement. The intent of this provision is to require that there be an applicable national effluent guideline for the pollutant for which relief has been requested which is applicable to the facility. To the extent that any applicant claims that this provision allows submission of a FDF variance request after issuance of the permit containing the limitations, the application deadline in section 301(n)(2) would supersede this provision.