

**FEB 8 1988**

**MEMORANDUM**

**SUBJECT:** Effluent Guidelines for the Organic Chemicals and  
Plastics and Synthetics Fibers Industrial Category

**FROM:** James R. Elder, Director  
Office of Water Enforcement and Permits

**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 and Plastic and Synthetic Fibers (OCPSF) Category was published in the November 5, 1987 Federal Register, 52 FR 42522. The purpose of this memorandum is to provide interim guidance to the permitting authorities on the application of the OCPSF effluent guidelines to current and future NPDES permits. The regulation was effective December 21, 1987. Final permits issued after that date must reflect the limits in the effluent guidelines. Permits which currently are in draft form but have not gone to public notice should be revised to reflect the guidelines. Permits which have gone to public notice since November 5 should be re-examined and revised expeditiously prior to final issuance to reflect the guidelines.

This memorandum summarizes the limitations, monitoring requirements and compliance dates in the OCPSF regulations. Evidentiary hearings, PDFs, water quality-based limitations and BMPs are also discussed. Additional guidance on monitoring requirements will be prepared in FY88. More detailed guidance for indirect OCPSF dischargers subject to the reporting requirements of section 403 pretreatment regulations was separately issued on December 30, 1987.

This regulation is significant for the NPDES program because of the opportunity it provides to control the discharge of toxic pollutants to our nation's waters.

The rule prescribes limits on BOD, TSS, and pH for BPT and limits on as many as 63 priority pollutants for BAT. Pretreatment standards are established for 47 priority pollutants. The regulation sets limits for more individual priority pollutants than any previous national guideline. Some of the important features of the OCPSF regulation are summarized in the following sections of this memorandum. Interim permitting guidance is included in the relevant sections, as appropriate. Since the OCPSF regulations are complex (cover 62 pages in the Federal Register) you and your staff are encouraged to study the regulations carefully and not rely on the summaries herein as the sole basis for establishing permit limits.

### Industry Profile

The OCPSF industry is large, diverse and complex. The industry manufactures over 25,000 different organic chemicals, plastics and synthetic fibers. Of the approximately 1000 facilities covered by the guidelines, 750 are primary producers of chemicals and the remainder are secondary producers, i.e., their OCPSF production is ancillary to their primary production activities. Approximately 32 percent of dischargers are direct, 42 percent indirect and 26 percent either do not discharge to surface waters or have unknown discharge status. The estimated average daily process wastewater discharge per plant is 1.31 MGD for direct and 0.25 MGD for indirects. The non-discharging plants use dry processes, recycle their wastewater, or dispose of their wastewater by deep well injection, incineration, contract hauling or employ evaporation/percolation ponds.

Different products are made by varying the raw materials, the chemical reaction conditions, and the chemical engineering unit processes. The products being manufactured at a single large chemical plant can vary on a weekly or even daily basis. Thus, a single plant may produce simultaneously many different products using a variety of continuous and batch operations and the product mix may change on a weekly or daily basis.

As a result of the wide variety and complexity of raw materials and processes used and of products manufactured in the OCPSF industry, an exceptionally wide variety of pollutants are found in the wastewater from this industry. They include conventional pollutants (pH, BOD, TSS and oil and grease); an unusually wide variety of toxic priority pollutants (both metals and organic compounds); and a large number of nonconventional pollutants.

### Effluent Limitations

The OCPSF effluent guidelines are mass-based even though the limitations for every pollutant at every level of control (BPT, BAT, PSES, etc.) with the exception of pH are expressed as concentrations (milligrams or micrograms per liter). The permit writer must determine the appropriate process wastewater flow(s) to use to multiply by the appropriate concentration(s) of pollutant(s) to establish mass limits in the permit.

The appropriate process wastewater flow(s) to use to calculate the daily mass limits in the permit is the long term average flow. Maximum flows generally should not be used. Furthermore, permit writers should use flow reduction as a basis for establishing mass limits in permits where appropriate.

### BPT

BPT limits are established for three pollutants, BOD, TSS and pH, for facilities in seven subcategories: Rayon Fibers, Other Fibers, Thermoplastic Resins, Thermosetting Resins, Commodity Organic Chemicals, Bulk Organic Chemicals, and Specialty Organic Chemicals. The date for compliance with BPT is as expeditiously as practicable but not later than March 31, 1989.

### BCT

BCT is reserved for all subcategories.

### BAT

BAT limits are established for 59 or 63 pollutants depending on whether a facility employs end-of-pipe biological treatment (EOPBT). Those facilities employing EOPBT are subject to limitations for 57 organic chemicals, five heavy metals, and cyanide. Facilities not employing EOPBT have limits on 53 organic chemicals, five heavy metals, and cyanide. For facilities producing annually less than 5 million pounds of products covered by the guideline, BAT equals BPT. The date for compliance with BAT is as expeditiously as practicable but not later than March 31, 1989.

### PSES

Pretreatment standards for existing sources are applicable to indirect dischargers and are analogous to BAT limitations for direct dischargers. PSES are established for 47 priority pollutants (44 organic chemicals, two heavy metals and cyanide) which are determined to pass through POTWs. The date for compliance with PSES is November 5, 1990.

### PSNS

Pretreatment standards for new sources are applicable to new indirect dischargers and are equivalent to PSES. New sources must comply on commencement of discharge.

### NSPS

New source performance standards are established as equivalent to the BPT and BAT limitations. NSPS are based on the model BPT and BAT treatment technologies. Thus a new source will be subject to the same BPT baseline limitations for the conventional pollutants according to its products (subcategories) and to a BAT level of control depending on whether or not it employs biological treatment.

### Compliance Dates

The date for compliance with the technology-based requirements of the OCPSF guidelines for existing direct dischargers is March 31, 1989 deadline and for existing indirect dischargers is November 5, 1990. The Water Quality Act of 1987 recognized the possibility that OCPSF facilities may be unable to comply with the March 31, 1989 deadline because of the delay in promulgating the guidelines. The legislative history states:

"If dischargers in an entire category are unable to meet the March 31, 1989, deadline as a result of the Administrator's failure to promulgate effluent limitations in sufficient time to allow for compliance by such date, noncompliance resulting from the Administrator's delay can be dealt with under EPA's current post-1984 deadline enforcement policy. That policy calls for the Agency, at the same time a permit containing the statutory deadline is issued, to issue an administrative order to the non-complying company which specifies a schedule of compliance as expeditiously as practicable, but not later than three years after permit issuance. Permits issued on the basis of best professional judgment in advance of promulgation of effluent guidelines will be able to comply with the statutory deadline, and EPA and the States should consider the use of such permits if effluent guidelines are delayed."

The permitting authorities should use the legislative history as guidance when extending compliance deadlines beyond March 31, 1989. If, at the time of permit issuance, the State or Region determines that the discharger cannot meet the March 1989 deadline, a compliance schedule extending past the March 1989 statutory deadline must be contained in an administrative order and public noticed with the permit. Any other extensions past March 1989 must be in an administrative or judicial enforcement action.

#### Monitoring Requirements

The OCPSF regulation does not prescribe monitoring requirements. EPA recognizes that specific guidance on appropriate monitoring requirements for OCPSF plants would be useful, particularly to assure that monitoring not be needlessly required for pollutants that are not present in discharges at a plant. The monitoring scenario assumed by EPA for purposes of estimating the costs of complying with the OCPSF regulation was weekly sampling, or four samples per month. All plants were assumed to monitor three times per month their toxic pollutants expected to be present at levels of regulatory concern. A fourth monthly analysis was assumed and costed for all regulated toxic pollutants.

In assessing wastewater data as part of the analysis for developing appropriate monitoring frequencies for toxic pollutants, permit writers should take special care to account for the effects of dilution, which may indicate the absence of pollutants which in fact may be discharged. For example, a Form 2C permit application may indicate that a pollutant is absent or is present only at very low concentrations. This situation may reflect dilution and may fail to reveal that the pollutant is genuinely associated with and discharged from the plant in significant amounts.

Thus, permit writers should obtain in-plant, pre-dilution data when necessary to properly characterize the wastewater for purposes of establishing monitoring requirements.

EPA intends to publish guidance on monitoring at OCPSF facilities in the near future. The guidance will address both the issues of compliance monitoring generally and of initially determining which pollutants should be subject to infrequent monitoring based on a conclusion that they are unlikely to be discharged by a particular facility. Staff of the Permits and Enforcement Divisions will be working with the Industrial Technology Division on the monitoring guidance. Questions or comments on monitoring issues related to the OCPSF industry should be addressed to Hap Thron at PTS/202-475-9537.

### Evidentiary Hearings

Permits for OCPSF facilities based on BPJ which have evidentiary hearing requests pending or granted, but for which no initial decision has been rendered, should be withdrawn pursuant to the NPDES regulations, 40 CFR 124.60(b). The contested permit(s) should be withdrawn and reissued to reflect the OCPSF guidelines using the same process of public comment and opportunity for public hearing as any other draft permit.

### FDF Variances

#### BPT

Direct dischargers are eligible for FDF variances from BPT upon a satisfactory showing by the permittee that its request satisfies the regulatory criteria contained in 40 CFR Part 125 Subpart D.

A request for a BPT FDF variance from the organic chemicals regulation must be submitted along with any BAT FDF variance request by May 3, 1988, 180 days after the regulation was published in the Federal Register. If a request is only from BPT, an argument can be made that a BPT FDF variance request currently can be submitted by the close of the comment period on the draft permit.

#### BAT

Direct dischargers are eligible for FDF variances from BAT upon a satisfactory showing by the permittee that its request satisfies the criteria contained in section 301(n)(1) of the Clean Water Act. One requirement is that an application for an FDF variance from BAT be based solely on information and supporting data that discussed the FDF factors and was submitted to EPA during the OCPSF rulemaking establishing the limitations, or on information and supporting data that the applicant did not have a reasonable opportunity to submit during the rulemaking. A BAT FDF variance request must be submitted by May 3, 1988.

#### PSES

Indirect dischargers are eligible for FDF variances from PSES upon a satisfactory showing by the permittee based on the statutory criteria. FDF variances from PSES are subject to essentially the same requirements as those for FDF variances from BAT. A PSES FDF variance request must also be submitted by May 3, 1988.

Further information on the FDF process as it applies to the OCPSF regulations may be obtained from Mr. Gary Hudiburgh at FTS/202-475-9531. Please notify Mr. Hudiburgh immediately of any variance requests you receive so that we are aware of the variance workload you are experiencing, and the issues being raised and can assist you in their resolution. In addition, when you receive a request for an FDF variance from the OCPSF guidelines, a copy should be submitted to Permits Division by the Region for a determination of national significance. As you know, the Director of OWEF must concur on a specific decision when the request raises issues of national significance.

#### Water Quality-Based Limitations

All NPDES permits for OCPSF facilities must contain limitations that assure compliance with both technology-based effluent guidelines and applicable numeric and narrative water quality standards. Since the industry manufactures over 25,000 different chemicals, plastics and synthetic fibers in a wide variety of continuous and batch processes and individual facilities often produce many different products simultaneously and experience frequent changes in product mix, waste water discharges will often contain an exceptionally wide variety of pollutants. In order to assure compliance with water quality standards, most OCPSF permits should contain whole effluent toxicity limits based on the principles described in the Technical Support Document and the 1984 Policy for Water Quality-Based Permit Limitations for Toxic Pollutants 49FR 9016 (March 1984). If insufficient data are available for determining the most sensitive species or for establishing toxicity limits, then section 308 or other authority should be used to require the OCPSF facility to conduct necessary toxicity tests prior to permit issuance.

Due to the requirements for toxics control established in the 1987 amendments to the Clean Water Act, many OCPSF facilities are likely to be required to achieve rapid compliance with State water quality standards. Section 304(1) of the Act requires States to develop by February 4, 1989 lists of waters for which State water quality standards have not been achieved due to the point source discharge of toxic pollutants. Those facilities discharging to the listed waters will be required to have final individual control strategies (ICS's) in place by that same date. The ICS's, which we are interpreting as NPDES permits, must contain limits which will achieve compliance with applicable numeric and narrative water quality standards by June 4, 1992.

These new requirements will not negate analysis of water quality impacts for facilities not on listed waters. However, they may result in establishing a phased approach for OCPSF permittees in which the first phase of permitting is directed only toward those high priority facilities discharging to listed waters. Subsequent phases of water quality permitting will focus on all other permittees which may not have been listed due to a lack of water quality data.

#### Best Management Practices

BMPs are not established by the OCPSF guidelines but some in-plant controls in the form of housekeeping practices, spill control, water conservation, etc. may be required to meet the effluent limitations, particularly BAT. In the absence of BMPs established pursuant to the authority of section 304(e), permit writers may use the authority of section 402(a)(1) of the Clean Water Act to establish BMPs as special conditions in permits on a case-by-case basis.

Attached for your reference is a two page summary of the OCPSF effluent limitations guidelines corresponding to the various subcategories and levels of technology-based controls. Again, I caution you to refer to the regulation itself when extracting information for permitting purposes.

Undoubtedly, there will be many questions raised by the permitting authorities and the regulated community as we begin to implement the OCPSF effluent guidelines through permits. As a first step toward answering questions and addressing your concerns, the Industrial Technology Division has scheduled a series of workshops for government regulators as follows: February 10 in Dallas, March 9 in Secaucus, NJ, and March 23 in Charleston, SC. For workshop reservations and more information, call Dianne Borden at Westec Services, Inc. (703) 471-5550.

Your immediate questions on the application of the OCPSF guidelines to permits should be addressed to James Gallup, Chief of the Technical Support Branch at FTS/202-475-9541.

Attachment

cc: J. William Jordan  
David Lyons