

### 5.3.1.1 Effluent Limits/Technology-Based Effluent Limits/ Non-Domestic Discharges/Legal Foundation

#### **Applicability:**

Describes the history of technology-based limits and provides statutory and regulatory citations about the authority to establish effluent limits.

#### **Content:**

##### **Historical Context**

The U.S. EPA NPDES Permit Writers' Manual, Chapter 5, Section 5.1.1, outlines the statutory and legal background related to technology-based effluent limits for non-domestic dischargers. A summary of that background information follows:

The Federal Water Pollution Control Act Amendments of 1972 directed EPA to develop standards of performance (effluent limitation guidelines or "ELG's") for industrial categories. For industrial dischargers, the Act directed the achievement:

"...by July 1, 1977, of effluent limitations which will require application of the best practicable control technology currently available [BPT], and by July 1, 1983, of effluent limitations which will require application of the best available technology economically achievable [BAT]"

EPA defined BPT performance as the "average of the best existing performance by well-operated plants within each industrial category or subcategory." The BAT level of performance was defined as the "very best control and treatment measures that have been or are capable of being achieved." The 1972 amendments, however, made no distinction regarding the application of BPT or BAT to different types of pollutants (i.e., BPT and BAT applied to all pollutants). The CWA did provide additional guidance for determining the economic achievability of BPT and BAT.

The BPT standards required that effluent limits be justified in terms of the "total cost of [industry wide] application of the technology in relation to the effluent reduction benefits to be achieved."

Thus, engineering factors relating to a category's ability to achieve the limits. For BAT, the Agency must still consider the cost of attainability, however it is not required to balance cost against the effluent reduction benefit.

As noted above, the 1972 amendments tasked EPA with developing ELGs representing application of BPT, BAT and New Source Performance Standards (NSPS); however, EPA was unable to complete development of all effluent guidelines within the statutory deadlines. In addition, EPA did not fully address toxic discharges in the guidelines it did promulgate. As a result, EPA was sued by several environmental groups for failing to accomplish the promulgation of effluent guidelines as directed by the 1972 amendments. As a consequence of the suit, EPA and the environmental groups entered into a settlement agreement that required EPA to develop a program and adhere to a schedule for promulgating BAT effluent guidelines, pretreatment standards, and NSPSs (NRDC v. Train, 1976). The standards focused on 65 toxic "priority pollutants" (including classes of pollutants) for 21 major categories of industries (known as "primary" industries). This settlement was incorporated in the 1977 amendments to the Act. This settlement was further amended to include a total of 34 major categories of industries and 129 priority pollutants (NRDC v. Costle, March 1979). [Note: The list of priority pollutants was subsequently revised to include 126 specific parameters, which are listed in Appendix A of 40 CFR § 423.]

In light of the settlement agreement, the 1977 amendments to the Federal Water Pollution Control Act (renamed the Clean Water Act [CWA]) revised the scope and application of BAT

requirements to focus solely on toxic and nonconventional pollutants. The amendments also required the application of the best conventional pollutant control technology (BCT) for conventional pollutants. Both the BAT and BCT standards were defined to represent the best control and treatment measures that have been developed or that are capable of being developed within the industrial category or subcategory. With respect to the cost reasonableness, the 1977 CWA left the BAT definition relatively unchanged. For BCT, EPA was to consider the reasonableness of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result. The cost of meeting BCT limits was expected by Congress to be comparable to the costs of achieving secondary treatment for POTWs.

To date, EPA has established guidelines and standards for 56 different industrial categories (e.g., metal finishing facilities, steam electric power plants, iron and steel manufacturing facilities). These guidelines appear in 40 CFR Parts 405-471, and are called "Categorical Standards".

When applying applicable ELGs in permits, permit writers need to be aware that they do not have the authority to extend statutory deadlines in NPDES permit; thus, all applicable technology-based requirements (i.e., ELGs and BPJ) must be applied in NPDES permits without the benefit of a compliance schedule.

### **Statutory and Regulatory Provisions**

Section 101 of the Federal Clean Water Act is the Declaration of Goals and Policy. Among its provisions are the call to eliminate discharges to surface waters, protect beneficial uses, prohibit the discharge of toxic materials and protect the primary responsibilities of States with respect to programs for water quality, pollution control and permitting. Section 301 makes it unlawful to discharge unless in compliance and establishes schedules for achieving compliance with effluent regulations. Section 302 provides the basis for water quality related effluent limitations, and Section 304 requires EPA to publish effluent regulations based on technological control measures. Sections 306 and 307 are the bases for technology-based limits for categorical industries, toxic controls and pretreatment effluent guidelines. Section 402 authorizes the National Pollutant Discharge Elimination System (NPDES) and provides information about State permitting programs. Section 405 relates to the disposal of sewage sludge. (See also 40 CFR Part 401.12)

The NPDES Program is described and detailed in the Code of Federal Regulations (CFR) and criteria and standards for effluent limits are presented. The pertinent parts of the CFR are listed in the Legal References below.

The Missouri Clean Water Law in its statement of policy (Section 644.011) indicates that the state will meet the requirements of the federal Clean Water Act. The powers and duties of the Clean Water Commission, in particular Section 644.026.1(8), (13), (16) and (17), enable and indicate the state will implement a permit program with effluent limitations in conformance with the federal program. Section 644.051.2-15 presents the provisions of the Missouri's permit program.

The primary regulatory provisions of the permit program are presented in:

- 10 CSR 20-6.010 General,
- 10 CSR 20-6.011 Fees,
- 10 CSR 20-6.015 No-Discharge Permits,
- 10 CSR 20-6.100 Pretreatment, and
- 10 CSR 20-6.200 Storm Water.

The effluent limitation requirements are presented in 10 CSR 20-7.015 and supported by information in the Water Quality Standards, 10 CSR 20-7.031.

## Legal References:

*Missouri Clean Water Law, Chapter 644*

[Chapter 644](#) Water Pollution

*Code of State Regulations:*

[10 CSR 20-6.010](#) Construction and Operating Permits

[10 CSR 20-6.011](#) Fees

[10 CSR 20-6.015](#) No-Discharge

[10 CSR 20-6.100](#) General Pretreatment Regulation

[10 CSR 20-6.200](#) Storm Water Regulation

*Code of Federal Regulations*

[40 CFR Parts 122, 123, 124, 125, and 129](#) specifically the provisions related to the NPDES Program:

[40 CFR 122.1 to 122.64](#) EPA Administered permit programs: the NDPEs

[40 CFR 123.1 to 123.64](#) State program requirements

[40 CFR 124.1 to 124.66](#) Procedures for decision making

[40 CFR 125.1 to 125.124](#) Criteria and standards for the NDPEs

[40 CFR 129.1 to 129.105](#) Toxic pollutant effluent standards

[40 CFR Parts 400 to 471](#) Effluent Limitations and Guidelines (General Provisions, General Pretreatment Standards and Categorical Industry Standards)

*Federal Clean Water Act*

[Statement of Goals and Policy](#)

[Enforcement and Effluent Limitations](#)

[NPDES System, State Programs and Sludge Disposal](#)

## Other Links:

[U.S. EPA NPDES Permit Writers' Manual, in particular Chapter 5](#)

## Key Words:

Effluent limits, toxic pollutant, non-conventional pollutant, conventional pollutant, effluent limit guideline (ELG)

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