



Improving EPA's Performance with Program Evaluation

Evaluation of Implementation Experiences with Innovative Air Permits: Results of the U.S. EPA Flexible Permit Implementation Review

Series No. 7

By continuously evaluating its programs, EPA is able to capitalize on lessons learned and incorporate that experience into other programs. This enables the Agency to streamline and modernize its operations while promoting continuous improvement and supporting innovation. This series of short sheets on program evaluation is intended to share both the results and benefits of evaluations conducted across the Agency, and share lessons learned about evaluation methodologies in this evolving discipline. For more information contact EPA's Evaluation Support Division at www.epa.gov/evaluate.

At a Glance

Evaluation Purpose

To evaluate implementation experience with flexible permits.

Evaluation Type

Performance/Outcome Evaluation

Publication Date

November 2002

Partners

Office of Air Quality Planning and Standards,
Office of Policy, Economics and Innovation,
Office of Policy Analysis and Review,
Office of General Counsel,
Office of Enforcement and Compliance Assurance

Contacts

Mike Trutna, OAQPS (919) 541-5345

Dave Dellarco, OPEI (206) 553-4978

Background: Why was an evaluation performed?

Over the last several years, EPA and several State and local permitting authorities have worked with several companies to develop innovative approaches to air permitting. EPA and the States launched flexible permitting pilots to increase operational flexibility while ensuring environmental protection. Permit developers sought to encourage and facilitate emissions reductions and pollution prevention with the flexible permits. The permits were also designed to reduce the administrative “friction”—costs, time, delay, uncertainty, and risk—associated with making certain types of operational and equipment changes. Additionally, permitting authorities desired to reduce the resources needed for case-by-case applicability determinations and for the approval process of minor and major New Source Review (NSR) permit applications and other permitting amendments. Permitting authorities designed these “flexible permits” within the existing regulatory framework (i.e., approaches were not precluded under any relevant Federal or State regulation) to address all applicable air requirements.

As interest in flexible air permitting increased, so did concerns, both internal and external, as to whether the permits actually worked, achieved environmental reductions, and were enforceable. In response to these critical questions and concerns, EPA saw the need to evaluate its implementation experience with flexible permits developed under such pilot efforts as EPA's Pollution Prevention in Permitting Program (P4) and State innovation activities. Particular interest has focused on flexible permitting techniques such as plant-wide emissions limits (e.g., plant-wide applicability limits, or PALs; potential-to-emit caps). In response to this need, EPA launched the Flexible Permit Implementation Review to conduct in-depth reviews of six flexible permits developed since 1993.

Basic Evaluation Approach: How did they do it?

The evaluation process comprised five steps, outlined below.

- Step I:** Develop the Flexible Permit Review Framework, which includes specific evaluation questions grouped into eight areas of inquiry, to structure the six permit reviews.
- Step II:** Develop evaluation criteria to select six permit pilot programs that would be the subject of this review.
- Step III:** Collect data by conducting off-site research and pre-site visit conference calls.
- Step IV:** Conduct on-site visits to the permitted source and the permitting authority to obtain data necessary to complete the Flexible Permit Review Framework; conduct a quality assurance review of data to ensure the accuracy of information catalogued in the Flexible Permit Review Frameworks.
- Step V:** Prepare Permit Review Reports (findings and recommendations).

Evaluation Results: What was learned?

- ***The flexible permits facilitated and encouraged emissions reductions and pollution prevention.*** The companies with flexible permits significantly reduced actual plant-wide emissions and/or emissions per unit of production (e.g., those sources with at least five years of implementation experience under the flexible permits achieved a 35 percent to 85 percent reduction in annual emissions of volatile organic compounds, which contribute to the formation of ground-level ozone). In addition, provisions allowing advance approval for certain changes reduced the administrative costs associated with pollution prevention, making pollution prevention more attractive for companies to undertake. The terms of several flexible permits encouraged pollution prevention through explicit pollution prevention program, reporting, and performance requirements.
- ***The flexible permits worked as intended, assuring appropriate environmental protection under all applicable requirements.*** EPA found that the monitoring, recordkeeping, and reporting approaches established in the permits were sufficient to assure compliance with all applicable requirements, including those associated with the advance-approved changes. EPA independently

Approach for this Evaluation

Step I

Develop Flexible Permit Review Framework

Step II

Select Flexible Permit Pilots for Review

Step III

Collect Data

Step IV

Conduct Interviews/On-site Visits and QA of Monitory Data

Step V

Prepare/Compile Report Findings & Recommendations

verified the ability to determine compliance with the permits using actual emissions and monitoring data and procedures required by the permits. In addition, most of the flexible permits provided equivalent or greater information available to the public when compared to conventional permits, although the flexible permits shifted the timing, type, and format of information. The flexible permits typically required more comprehensive and frequent emissions monitoring, reporting, and recordkeeping.

■ ***Companies and permitting authorities experienced significant benefits from the flexible permits.***

Companies with flexible permits experienced significant financial benefits. In most cases, the flexible permits enabled the companies to respond to new market opportunities and to save several hundred hours in staff time needed to negotiate and prepare individual construction permit applications. The flexible permits saved State and local permitting authorities staff time associated with processing case-by-case construction permit applications, enabling them to reduce permitting backlogs and focus resources on higher environmental priorities. All of the permitting authorities reported that they “would do it again” with the particular sources and that they hope to use flexible permitting approaches with other appropriate sources again in the future.

Evaluation Outcome: What happened as a result?

Begun in March 2001, and published in November 2002, the report and its findings are being used: (1) to inform the NSR Improvement Rulemaking—the final evaluation report was included as part of the official docket and was used in confirming that the PALs emissions caps are workable; (2) to inform an internal dialogue about the development of the Agency’s P4 policy; (3) as guidance for how the Agency should operate and improve existing and future flexible permitting pilots; and (4) as a teaching tool for permitting authorities about flexible permits.