

11 suggested steps to prepare for a successful operating permit

GALE F. HOFFNAGLE AND STEPHEN WALATA III

Detailed thought and knowledge will ensure careful planning and preparation.

The 1990 Clean Air Act Amendments include requirements for each state to adopt an operating permit program which is federally enforceable. The U.S. Environmental Protection Agency (EPA) published the operating Permit Program Final Rules (Federal Register Vol. 57 No. 140) in July 1992. In some states, this will be a new program. Other states already have operating permit programs, and the new requirements will either replace or be added to current regulations. Preparation of a permit application should be carefully thought out. The permit application should list the regulations and emission limits which apply to the facility, and, almost more importantly, it should list those regulations that do not apply. It must contain record keeping and reporting systems and may include provisions for parametric and/or continuous emission monitoring (CEM). To be successful, the source should start to collect the necessary data and plan now.

The operating permit issued will contain information on every point in the facility. It will include emission limitations, record keeping, and reporting requirements. These conditions will be enforceable by the U.S. EPA and the state in the same way that the New Source Review (NSR) and Prevention of Significant Deterioration (PSD) regulations are enforceable. Failure to meet any of the conditions or reporting requirements can lead to stiff penalties and criminal liability.

Completion of the 11 steps requires detailed thought and knowledge about all of the emission points. The up-front analysis outlined below will provide a complete and accurate application for submission. It is important to recognize that data reported under current registration programs or SARA TRI reports will typically not be sufficient under this new permit program. Unless that data can withstand the rigors of a federal inspection or audit, it could result in noncompliance, fines, and possibly even criminal sanctions.

Step 1: Identify each source of emissions:

The foundation of the application process is to identify all emission points and all connected processes. Include every potential emission source as well as fugitive emissions. Record

the identification number of each stack and vent as well as descriptors of fugitive sources. Document (and later map) the location of each emission point. Also record stack heights, fan speed, and information on any control equipment associated with each point. Be complete and list all emission points, even if the point is exempt from permit requirements.

Step 2: Determine actual and potential emissions:

Applicants need to determine and document both actual and potential emissions from each of the points identified in Step 1. Be sure that all regulated pollutants are covered, plus any other state or locally regulated pollutants. Use estimating methods consistent with state guidelines.

Define the potential to emit (PTE) for each process. The PTE may include limitations on operating hours, throughput, transfer efficiency, capture efficiency, and the use of control devices, to the extent these conditions are federally enforceable. Batch operations should include information on how many batches per year are expected. All federally enforceable limitations on a facility's PTE will be included in its operating permit.

Remember that a violation of any of the emission limitations in the permit can result in enforcement action. Consider very carefully the consequences of any permit restrictions identified in the application; absent a permit modification, you will have to live with them for at least five years. Also, if any deficiencies in the facility's record keeping practices are discovered during the process of determining emissions, make a note to fix them (see Step 7 also).

Step 3: Determine whether the permit requirement applies to your facility:

The applicability of the operating permit is always linked to the PTE, not the actual emissions. Do not assume that because a source is not major for one pollutant, it will not be major for another. Remember: If a facility is considered a major source

Operating Permit

for one pollutant, the permit application for all regulated pollutants must be completed.

To determine if a facility is a major source, aggregate all of the PTE emissions identified in Step 2 and compare the total with the criteria listed in **Table I**. If the facility exceeds any of the thresholds listed, it will need an operating permit. Generally, a facility with a PTE of 100 tons/year of any single pollutant regulated under the Act requires an operating permit. Moreover, emissions of 10 tons/year for any one Hazardous Air Pollutant (HAP) or 25 tons/year for any combination of HAPs would also require the facility to obtain an operating permit.

Also consider what is included within the "facility." A "facility" is defined by all the emissions on "contiguous and adjacent" property under common control or ownership in the same Standard Industrial Classification (SIC) code. If the first two digits of the SIC code are different (e.g., a mine and a processing plant), they can be considered separately when comparing to the major source threshold. Properties that are not contiguous and adjacent can also be considered separately. A facility which sold or leased a section of the plant to another independent corporation may also be able to separate out that portion.

When calculating whether the permit requirements apply to the facility, be sure to analyze whether the state agency has developed regulations that would allow the facility to apply for a so-called synthetic minor source permit, which would render the operating permit program inapplicable to the facility. A synthetic minor source permit would place federally-enforceable restrictions on potential emissions from the facility such that potential emissions would be below the major source threshold. For example, if the major source threshold is 100 tons/year VOCs, a synthetic minor permit would restrict potential emissions to below 100 tons/year through a combination of restrictions on operating hours, raw material inputs, or other restrictions.

As these restrictions would be enforceable at both the federal and state levels, the facility must be sure that it can continue to operate under the restrictions and in accordance with business plans (i.e., planned expansion, new product development, etc.). Given the benefits of not being subject to the operating permit program, it would be prudent to investigate whether a synthetic minor permit is a possibility.

Step 4: Determine applicable emission limits:

To determine compliance, applicants should identify and review all potentially applicable requirements and come to a decision on each. It is the applicant's obligation to cite all applicable requirements in the permit application. Be sure to review provisions applicable to criteria pollutants (nonattainment/Prevention of Significant Deterioration (PSD)), HAPs (MACT/NESHAPs/Generally Available Control Technology (GACT)), NSPS, acid rain, stratospheric ozone protection, and other state-only requirements. Also, review all state and local requirements to determine if any are federally

I. Major sources requiring operating permits

Potential annual emissions (tons)	
Attainment areas	100
Nonattainment areas	
Carbon monoxide	
Moderate	100
Serious	50
PM ₁₀	
Moderate	100
Serious	70
Ozone (VOCs and NO _x *)	
Marginal and moderate	100
Serious and all transport regions	50
Severe	25
Extreme	10
Air Toxics (189 hazardous air pollutants)	
One HAP	10†
Two or more HAPs	25

* Does not apply if EPA finds that NO_x control not required
† EPA retains the authority to reduce the major source threshold under the air toxics program.

enforceable. Finally, be careful to identify in the application all requirements that have been promulgated but are not yet effective. Specific provisions that do not apply to a facility should be clearly identified in the compliance determination and affirmed during the state's review of the application. For example, if miscellaneous VOC sources are not applicable to a permit, stating this determination up front may provide protection from overzealous regulators who might disagree later and try to make the omission a permit violation.

Step 5: Determine whether emissions comply with all applicable limitations:

The purpose of the Title V operating permit, as far as Congress is concerned, is enforcement related, i.e., to identify those facilities that are not complying with the Act. Using the applicable requirements from Step 4, make a determination of the facility's compliance status. Is compliance being achieved? Is all the equipment required by NSPS or NESHAP in place? Are the emission limitations being met? Is the required reporting and record keeping being performed? Consider this step a detailed Clean Air Act audit.

Step 6: If necessary, propose a compliance schedule:

It may be found via Step 5 that a facility is already in compliance with all of its applicable requirements. The more likely situation is that there are still certain requirements that will take some work to meet, and compliance must be achieved before submitting the application or establish a schedule for completing that work. To avoid surprises, always try to negoti-

ate the milestones of a compliance schedule with the state before submitting a permit application. In any event, the application must contain a compliance plan (i.e., how the facility will achieve or stay in compliance) and compliance certification, even if the facility is in 100% compliance.

It is important to note the differences between a compliance plan and a compliance schedule. A compliance plan is a narrative description of the compliance status of the facility and the steps that a facility will take to come into or continue to be in compliance with all applicable requirements. The compliance plan is not required to be a part of the operating permit, and is therefore not federally enforceable as a permit term or condition unless the permit writer is allowed to include it as a permit term or condition.

The compliance schedule, on the other hand, must be included in the permit. If the facility is in compliance with all applicable terms and conditions, the compliance schedule is merely a statement that the facility will continue to comply with all such requirements. If the facility is not in compliance with all applicable requirements, the compliance schedule must contain a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with all requirements for which the facility will not be in compliance at the time the permit is issued. Because this compliance schedule will be a part of the permit, the schedule should contain as little extraneous information as possible. For example, rather than including the narrative discussion of the steps that will be taken (which should be done in the compliance plan), the compliance schedule should merely set forth the schedule for completion of the specific measures that are necessary to achieve compliance.

Step 7: Propose measurement, record keeping and reporting methods:

The application must include a detailed description of the records to be maintained and the reports to be filed with the state to document compliance. Frequency of monitoring will vary from state to state, but reporting to the state will be necessary at least every six months. Propose the system that will work best for the facility and not negatively impact the degree of operational flexibility built into the permit. If that system is parametric monitoring, then propose parametric monitoring. If EPA's enhanced monitoring regulations indicate you will need CEM, allow time to evaluate CEM on a trial basis before making a formal proposal in the application. Try to obtain the most flexible averaging/monitoring times allowable under the Act or the state's rules. Also, keep in mind that these monitoring records are in the public domain, so do not provide extraneous results based on averaging times that are not in the plan. If public reports read like a litany of violations because they contain data not required by the permit, some fancy explaining will be necessary within the company and to the public as well. In short, make a plan and stick to it.

Note on Enhanced Monitoring: To provide greater accountability for emissions from major stationary sources, EPA

has proposed regulations calling for enhanced monitoring of pollutant emission rates. This could be imposed, in addition to baseline Title V record keeping and reporting systems, on any emission unit with a potential to emit a specific pollutant at a rate greater than 30% of its major stationary source threshold. EPA guidance lists various control devices and their corresponding monitoring parameters. For example, the recommended enhanced monitoring method for a fabric filter is monitoring of static pressure drop with daily Method 9 visible emissions evaluation for such a source. Parameters are also listed for other common control devices.

Enhanced monitoring is expected to require parametric monitoring plus periodic reference method testing to verify the relationship between the parameter monitored and the emission rate or control efficiency or both. Remember that enhanced monitoring is an enforcement tool. A source must establish a "demonstrated compliance parameter level," deviation from which will be considered deviation from the emission standard. Such deviation is subject to appropriate enforcement action.

Step 8: Combine each source into a permit or permits:

If the state requires facility-wide permits, this step is not necessary. Although facility-wide permits will generally be preferable, if the state allows a facility to be partitioned into several units with individual permits, weight the options carefully. Having several permits would narrow exposure when the permit has to be reopened, either to make a permit modification or upon the request of a regulatory agency. If the state allows multiple permits, it might be the best to partition the facility by SIC code, since categorical regulations are frequently issued in that manner. If different divisions of the company with different responsible officials are present at the site, permitting these divisions separately may be the way to go.

Step 9: Select flexible operating scenarios:

Now is the time to set up the application to provide maximum operating flexibility and growth potential for the facility. Though the future may not always be predictable, it can be planned for, so carefully consider how different operating conditions and processes are likely to affect emissions, and build in the necessary conditions now. Make a concerted effort to anticipate any expansions, process changes or changes in raw materials over the next five years and work toward a permit that reflects them even before or during the time they actually take place.

Step 10: Prepare a draft operating permit:

The operative rule of thumb here might be to never accept a permit you did not write yourself. Using the information and planning guides the permit team has developed, prepare both a draft permit application and a draft operating permit. This is

Operating Permit

the most important of all of the 11 steps, since it puts planning skills to work by providing the opportunity for making future process changes without having to modify the permit. Chances of succeeding will be better if any unnecessary restrictions can be eliminated from the draft.

The draft application and permit should identify and distinguish between limitations and records which are federally enforceable or only state enforceable. It should also identify sources which do not fall under either category, so any enforceable restrictions and record keeping on such sources can be excluded from the federally enforceable operating permit. Do not forget to brief the facility's senior managers and operating personnel on which conditions will be acceptable under the draft permit, and emphasize that any deviation from these conditions is an invitation to inspectors to detect violations and impose penalties. When drafting the permit, make sure it either demonstrates compliance from the outset or contains a compliance schedule the facility can meet. Although not always possible, if time allows, have the facility operate under the permit conditions for several months before filing the application to make certain that the provisions are achievable.

Step 11: Calculate fees, then sign and file the application:

In most states, operating permit fees will be at least US\$ 25 per ton of actual or potential emission in 1990 dollars (or US\$ 30.18 in 1993 dollars). The fee will be based on the structure adopted in the state's operating permit program rules. It is usually best to limit fee expenditures by estimating emissions accurately. Do not leave this aspect of the application process until the last minute. These fees can be substantial and the check must accompany the permit application.

Once the application is determined to be complete, the facility is shielded from enforcement for operating without a required permit. As states must notify an applicant if a permit application is not complete within 60 days of filing, sources may want to consider filing more than 60 days before the application deadline so any incomplete areas can be corrected before the deadline and the shield will remain intact. **[1]**

Hoffnagle is senior vice-president and technical director of TRC Environmental Corp., 5 Waterside Crossing, Windsor, CT 06095, and Walata is a senior chemical engineer with TRC Environmental Corp., 6340 Quadrangle Dr., Suite 200, Chapel Hill, NC 27514.