



FINAL Report:
Washington Department of Ecology
Title V Program Review

EPA Region 10
September 7, 2006

Table of Contents

Introduction.....	3
A. Title V Permit Preparation and Content.....	6
B. General Permits.....	8
C. Monitoring	9
D. Public Participation and Affected State Review	10
E. Permit Issuance / Revision / Renewal.....	11
F. Compliance	12
G. Resources and Internal Management Support	13
H. Title V Benefits.....	14
I. Document Review (Rules/Forms/Guidance)	15

Attachments

- I. Completed Questionnaire

Introduction

This report documents the Title V program review for Washington Department of Ecology (WDOE).

Overview and Program Review Objective

In response to recommendations in a 2002 Office of Inspector General audit, EPA has set an aggressive national goal of reviewing all state and local Title V programs by the end of fiscal year 2006. Specifically, EPA has developed an action plan for performing reviews of state and local Title V programs and has committed to continuing the Title V fee reviews begun in 1998. The objective of the broader program reviews is to identify good practices that other agencies can learn from, document areas needing improvement, and learn how EPA can help improve state and local Title V programs and expedite permitting.

EPA Region 10 has completed reviews of the Idaho, Oregon, Lane County (Oregon) and Spokane County (Washington) Title V programs. In addition, Region 10 is in the process of completing program reviews for Puget Sound Clean Air Agency (located in western Washington), Northwest Clean Air Agency (located in northwestern Washington) and Alaska Department of Environmental Quality.

We would like to acknowledge and express EPA's appreciation for the cooperation and patience of WDOE's management and staff throughout all stages of our review of their Title V program. Receiving the timely, complete and consolidated questionnaire response in advance of the on-site interviews was very helpful, allowing EPA to narrow the focus of our on-site interviews. WDOE's efforts to make management, staff, and space available to EPA for the interviews also helped make the on-site time very productive.

General WDOE Title V Program Background

WDOE is a state air pollution control agency with Title V authority for 17 of the 39 counties and for all chemical pulp mills and aluminum smelters throughout Washington state; all other counties fall under the Title V jurisdiction of seven local air pollution control agencies and all thermal electric energy projects in the state that are at least 350 megawatts in size fall under the jurisdiction of the Washington Energy Facility Site Evaluation Council (EFSEC). EPA is the Title V permitting authority in Indian country within Washington with one exception: Puget Sound Clean Air Agency is the Title V permitting authority on non-trust land within the 1873 Survey Area of the Puyallup Reservation.

WDOE's Title V regulations are found in Washington Administrative Code (WAC) 173-401. EPA granted WDOE, along with the seven local agencies and EFSEC, interim approval of its Title V program effective December 9, 1994, and full approval effective September 12, 2001, 66 FR 42439 (August 13, 2001).

WDOE issues Title V permits to approximately 28 sources through four different offices: Eastern Regional Office in the state's Air Quality Program (11 permits in 12 counties); Central Regional Office in the state's Air Quality Program (5 permits in 4 counties); Richland Regional Office in the state's Nuclear Waste Program (1 permit for the U.S. Department of Energy's Hanford facility); and the Industrial Section in the state's Solid Waste and Financial Assistance Program (11 permits for chemical pulp mills and aluminum smelters). The Northwest Regional Office has no Title V sources in the one county for which they are responsible. There are about 10 permit engineers at WDOE that spend at least some of their time on Title V permits (approximately 6.5 FTE); all of the Title V staff have non-Title V duties as well.

Program Review Basis

EPA's review of WDOE's Title V program, which began in May 2006, is based on answers WDOE provided to an EPA questionnaire, review of a selection of issued permits and statements of basis, review of available guidance documents and application form, and interviews with WDOE representatives during a site visit on June 28 and 29, 2006. This information was analyzed with regard to Part 70 regulations and policies and WDOE state regulations.

A questionnaire, developed by EPA Headquarters with input from the Regions and revised by Region 10 to include a table titled State/Local Title V Program Fiscal Tracking Evaluation Document (the protocol developed by EPA in 1997 and used in previous Title V fee program reviews), was sent to and completed by each of the four WDOE offices in advance of Region 10's on-site visit to the agency. We reviewed the completed, consolidated questionnaire (Attachment I) and other available information prior to the on-site visit, including the following issued permits (the issuing office is in parentheses):

Boise, Kettle Falls (Eastern)	Boise, Wallula (Industrial)
Vaagen Bros. Lumber (Eastern)	Simpson Tacoma Kraft (Industrial)
SDS Lumber (Central)	Kimberly Clark (Industrial)

While on site at the WDOE office, we interviewed the management and air permitting staff. We discussed WDOE's Title V fee program with management and finance staff. The purpose of the interviews was to confirm and clarify what we learned from our review of the permits and questionnaire and to ask questions that developed during our pre-visit review.

EPA's review team included four Region 10 staff members, including program, legal and technical staff. Key elements of each individual's observations, as well as observations from the on-site interviews, are highlighted and discussed in the report.

Program Review Report

This program review report is formatted consistent with the program review questionnaire. Within each of the topic areas, the report describes good practices, concerns, and other notable observations. The fee protocol information is addressed in the Resources and Internal Management Support section of the report. The report addresses the following topic areas:

- A. Permit/Review Report Preparation and Content
- B. General Permits
- C. Monitoring
- D. Public Participation and Affected State Review
- E. Permit Issuance/Revision/Renewal
- F. Compliance
- G. Resources and Internal Management Support
- H. Title V Benefits
- I. Document Review (Rules/Forms/Guidance)

With the exception of Section H, each section of the report highlights and discusses good practices, concerns, and other general observations. In response to the program review questionnaire and during the on-site interviews, WDOE identified a number of benefits that have resulted from the implementation of the Title V program. The notable benefits realized by WDOE, which reflect the value that can come from responsible implementation of such a comprehensive air quality program, are listed in Section H.

In general, we included in the report only those good practices that are unique to WDOE or seem particularly worth noting and passing along to other permitting authorities. WDOE's implementation of

the program includes many other good practices that are not specifically discussed in the report because they are widely used among other Title V permitting authorities.

A summary of concerns is also provided that identifies those issues that will need to be addressed. Some concerns identified in this review will need to be resolved as WDOE revises their operating permits and their program is updated. EPA Region 10 expects WDOE to respond to each of the concerns identified in this report. EPA will work with WDOE to address the identified concerns and will schedule follow-up as needed.

A. Title V Permit Preparation and Content

Good Practices

1. WDOE permit engineers routinely participate in the Washington permit engineers' quarterly meetings to share information with other agencies. Some of the permit engineers also perform inspections which gives them additional insight about their sources. Peer review of draft permits helps assure permit quality. While communications and consistency between offices could certainly be enhanced, any collaboration and peer review helps improve the quality of permits.
2. If WDOE's good practices were applied consistently across their offices which issue permits, the quality of their operating permits and statements of basis would be significantly improved. In one permit, the general conditions were organized to clarify which do not have to be addressed in the annual compliance certification. Some permits included testing requirements with tiered frequencies based on the results relative to the standard. Some statements of basis included thorough process descriptions, flow diagrams, plot plans, permit chronologies/histories, and well-organized requirement applicability analyses or explanations.

Concerns

1. While the permit formats varied some between offices, the content of the statements of basis varied greatly even between permit writers within the same office, resulting in a broad range of concerns. The statement of basis should include, among other things, a discussion of the monitoring and operational restrictions for each emission unit; any complex applicability determinations; any non-applicability determinations; the construction and permitting history of the source; and the compliance history of the source including inspections and any violations noted.¹ Some statements of basis lacked applicability discussions. For instance, there was rarely any discussion of hazardous air pollutant emissions or any other information that documented whether the source was major for hazardous air pollutants, which dictates the applicability of maximum achievable control technology (MACT) standards. Some statements of basis lacked a discussion about compliance assurance monitoring (CAM) applicability. Most statements of basis lacked explanations regarding the monitoring (including CAM) decisions in the permit. Finally, some statements of basis did not include thorough process descriptions. WDOE should consistently address these items in all statements of basis as permits are revised in the future.
2. Possibly related to the lack of MACT applicability documentation in some statements of basis, some permits appear to be missing applicable MACT standards. Where permits were issued prior to the compliance date of an applicable MACT standard, EPA has allowed the permitting authority to issue the permit with only a "place-holder" for the MACT standard, as long as the permit is reopened to add the MACT standard before the first compliance date. This allowed the permittee time to select their technique for complying with the MACT standard before adding it to the permit. Permits are required to be reopened when new MACT standards are promulgated if there is more than three years left before permit expiration. In either case, WDOE should review their permits to determine which should be reopened to add missing applicable MACT standards before the first compliance date.
3. Title V allows a "permit shield" for requirements that have been determined to be not applicable. Two reviewed statements of basis provided good explanations of the permit shield concept, particularly why permit shields should only include those requirements that might reasonably

¹ Letter dated December 20, 2001 from Steven Rosenblatt, Air Programs Branch, EPA Region V, to Robert F. Hodanbosi, Chief, Division of Air Pollution Control, Ohio Environmental Protection Agency.

apply and for which an inapplicability determination is both useful and appropriate to document for the public record. Some permits contained permit shields without sufficient information to determine whether a shield was warranted. In some permit shields, the list of non-applicable requirements included many requirements that were clearly not applicable. Finally, some permit shields included requirements that appear to apply to the source based on the information available. WDOE should clearly document permit shields to avoid future enforcement problems. WDOE should review their permits for incorrect permit shields and reopen those that need to be corrected.

4. Where permits paraphrase applicable requirements, it is important to clarify in the permit that wording in the underlying requirement is the enforceable wording. Some permits explained this in an introduction to the permit or at the beginning of the unit-specific requirements section of the permit; however, some permits were missing this important language. WDOE should be sure to clarify this in the future.
5. Permits should clearly identify those requirements that are enforceable only by the state and not EPA, often referred to as “state-only” requirements. While most permits labeled state-only requirements in some manner, few permits explained why the requirements were not federally enforceable. Often the state-only requirements are a result of state requirements that have not yet been submitted or approved as a revision to the state implementation plan. Some may become federally enforceable once they are approved. WDOE should consider clarifying the state-only requirements in the statements of basis when issuing permits in the future.
6. The table format used by WDOE, and other permitting authorities in Washington, can lead to difficulties for permit engineers. Some permit engineers tend to abbreviate necessary wording of rules and requirements in order to fit lengthy text into the narrow columns, which can lead to unclear or incomplete requirements. Often, substantial portions of pages are blank because all of the text is in a single column, which unnecessarily lengthens the permit without adding value. Formats that do not limit the space for writing a requirement help to ensure the requirement is written with the necessary details and formatting to make the requirement clear. See permits written by states such as Idaho and Oregon for examples. While it would likely take a considerable effort to change all of the permits to a text format, WDOE should consider the benefits of making format changes during permit renewals.
7. Requirements to operate and maintain (O&M) equipment are often found in underlying requirements. In some permits, O&M requirements are added to help assure compliance. O&M requirements can be effective at assuring that emission units and emission control devices are not only run, but kept in good running condition. Monitoring, on the other hand, is generally used to identify problems (or assure there are no problems) while maintenance is used to avoid problems or to address identified problems. Operation and maintenance requirements do not necessarily satisfy the need to have monitoring; in fact, monitoring should be specified to assure compliance with any operation and maintenance requirements. To ensure that O&M requirements are as effective as they can be, WDOE should consider the following strategies: require submittal and possibly even approval of O&M plans; require periodic updates of O&M plans; require that O&M plans be followed; add those parts of O&M plans that are critical for assuring compliance to the permit if WDOE is relying on them to assure compliance (as the compliance technique, periodic monitoring, or CAM); and add monitoring or recordkeeping to ensure the O&M plan is being implemented.

Other Observations

None

B. General Permits

WDOE has not developed or issued any general permits.

C. Monitoring

Good Practices

1. Some WDOE offices have a number of criteria (e.g. source variability, degree of compliance) they use to judge whether adequate monitoring exists, which can be very useful for assuring consistency and for documenting decisions; however, the criteria is rarely discussed in the statements of basis and WDOE does not seem to be consistent in its application.
2. Many of WDOE's permits included tiered emission monitoring and testing where monitoring can lead to corrective actions and reporting and test results are used to set the frequency of testing based on how close to the standard the most recent test was. This is an excellent way to provide flexibility to permittees and enhanced attention where compliance is a concern. See the comment below for some suggestions for improving this approach.

Concerns

1. Operating permit renewals are required to include CAM for all emission units subject to 40 CFR part 64. Some WDOE statements of basis do not explain which emissions units are subject to CAM or what decision has been made regarding CAM. Ensuring monitoring that adequately assures compliance is one of the most important purposes for Title V operating permits. WDOE should review their renewal permits and statements of basis to ensure CAM is adequately addressed for all subject emission units.

Other Observations

1. Use of a bag leak detector system such as a triboelectric monitor on bag houses may be a useful tool in ensuring appropriate baghouse operation, as these monitors are sensitive enough to pick up even small leaks in bags and they are a relatively inexpensive continuous monitoring option.
2. Particulate matter continuous emission monitoring systems are available and have been demonstrated in use. These systems can be used on wet and dry exhaust streams. For sources that normally operate very near the particulate matter standard or have highly variable emissions, continuous emission monitoring is now a good alternative to frequent emission testing.
3. As discussed in the good practices above, many of WDOE's permits contain tiered monitoring and testing requirements. The approach normally begins with some sort of an observation which can lead to corrective actions, additional observations and eventually deviation reporting. Tiered monitoring can be enhanced by linking it to testing when potential compliance concerns are identified. Where initial observations indicate possible concerns about compliance, the permit can be designed to automatically require a reference method test to confirm compliance. This is particularly appropriate where the initially-observed concerns recur often or are not promptly corrected. When renewing permits, WDOE should consider adding specific reference method testing where appropriate through the use of "automated" test requirements.

D. Public Participation and Affected State Review

Good Practices

1. In addition to publishing public notices in at least one newspaper of general circulation and sending them to their maintained mailing lists, WDOE publishes public notices in their Air Operating Permit Register and posts them on their website. Notices are also sent to a list of affected states and tribes. The mailing lists are unique to each source.

Concerns

1. Like many of the permitting authorities across the country, WDOE provides the permittee with a pre-draft permit for review and comment before the draft permit goes out for public comment. Soliciting the permittee's input on the factual aspects of the permit can help to reduce errors in the permit and help educate the permittee on its obligations under the permit. Working with the permittee on developing the substantive requirements of the permit, however, can create the impression that the permit issuance process is not an open process. WDOE should carefully balance these interests as it works with permittees during the development and issuance of Title V permits.

Other Observations

1. Public involvement is an important part of the Title V process. The Clean Air Act requires states to solicit public comment on draft permits and to provide the public the right to challenge permits in state court. Although WDOE meets these requirements, only about 18% of their Title V permits receive comments from someone other than the permittee or EPA. WDOE does not provide outreach to the public on how the Title V program works or how the public can participate in the review and issuance of Title V permits. Though WDOE has a staff member serving as a lead for environmental justice, it was not obvious that WDOE's air program has been routinely implementing an environmental justice program. They have, however, on one occasion provided notices in a language besides English. By providing basic training to the public on how the Title V program works and how the public can participate in the review and issuance of Title V permits, WDOE could help ensure a more meaningful public participation process.

E. Permit Issuance / Revision / Renewal

Good Practices

1. When public noticing draft permit revisions, some WDOE offices identify permit revisions using redline/strikeout or color coded formatting, along with a narrative description. This is a clear way to show exactly the changes that have been made to the permit and that are open to public comment.
2. WDOE seems to have been fairly successful in obtaining adequate information for and processing renewal applications. Each office works closely with their permittees well in advance of the deadlines for renewal and, in the case of the complicated Hanford permit, a desired schedule for permit application and processing is communicated 18 months before the permit expires.

Concerns

1. Minor permit revision applications are required by Title V to include the permittee's suggested changes to the permit and certification by a responsible official that the proposed change meets the minor permit modification criteria. WDOE also requires public noticing of minor permit modifications. Not all WDOE offices were aware of these requirements. WDOE should ensure proper processing for all permit actions, including minor permit revisions.
2. WDOE's permits contain general testing requirements that include the ability to have alternative test methods or monitoring methods approved by WDOE. Significant changes to test methods or monitoring methods in Title V permits can be made only through the significant permit revision procedure. In addition, WDOE cannot approve an alternative to the test method that is approved as part of the state implementation plan (SIP). See 40 CFR 51.212. WDOE should appropriately limit the authority to approve alternative test methods and monitoring methods in future permits.

Other Observations

1. WDOE shares the responsibility for processing the U.S. Department of Energy's Hanford facility Title V permit with the Washington Department of Health, with responsibility for radionuclide requirements, and the Benton Clean Air Agency, with responsibility for asbestos and outdoor burning requirements in Benton County. A "Tri-Party Agreement" between WDOE, EPA and the Department of Energy addresses cleanup issues at Hanford and contains specific communication requirements for environmental regulatory actions, including a 30-day notice for stakeholders. The number of agencies involved in the regulation of Hanford creates additional demands for coordination and, according to WDOE, can result in some delays in permit issuance. For example, WDOE specifically noted that the 90 day deadline to issue significant permit modifications for Hanford is nearly impossible to meet.

F. Compliance

Good Practices

1. One WDOE office documents deviation report reviews using an excess emission report form. Another office reviews deviations, semiannual reports and annual compliance certifications from the viewpoint of possible improvements in permit conditions, control technology and safety, health and environmental impacts. Documentation of report reviews is a good approach for assuring consistent agency responses.
2. WDOE requires all deviations to be reported no later than 30 days after the end of the month in which they were discovered, with some reported sooner. This should allow WDOE to ensure more timely mitigation and enforcement as needed.

Concerns

1. One WDOE office does not verify that the source is in compliance before a permit is issued. Title V requires a compliance schedule be created and added to the permit if a source is out of compliance at the time of permit issuance. Given their experience and familiarity with their assigned sources, WDOE permit writers should be able to easily verify compliance before permit issuance. WDOE should always confirm the need for a compliance schedule prior to permit issuance.
2. Based on the questionnaire response and interview, the WDOE offices treat deviations and excess emissions differently. Inconsistent implementation of Title V permits can lead to enforcement difficulties. WDOE noted during the on-site interview that any such inconsistency has not yet been raised as an issue by permittees or the public. Regardless, WDOE should consistently interpret and enforce their Title V program in the future.
3. Like many permitting authorities, WDOE requires corrective actions when certain monitored parameters are outside of the acceptable range. This is a practical approach for assuring potential operational problems are addressed promptly. When using this approach, WDOE should clarify when a deviation occurs (when the unit is outside the range or if corrective action is not taken), such that the appropriate records are created and reported. Furthermore, WDOE should add recordkeeping so each event of operation outside the acceptable range is documented, even if it is not required to be reported as a deviation.

Other Observations

1. The focus of this Title V program review was on WDOE's implementation of its Title V program. Accordingly, in conducting this Title V program review, EPA did not review reports submitted by Title V facilities to determine the extent of compliance with Title V requirements in WDOE's jurisdiction and whether WDOE is taking appropriate enforcement actions in response to noncompliance. EPA also conducts periodic reviews of state and local Clean Air Act enforcement programs which look at, among other things, source compliance and enforcement actions.

G. Resources and Internal Management Support

Good Practices

1. WDOE appears to have an accounting system which effectively tracks Title V revenues and expenses separate from non-Title V revenues and expenses.

Concerns

1. The U.S. Department of Energy pays for one FTE to assist in environmental oversight of the Hanford facility. It is not clear whether the position(s) funded by this FTE performs Title V work; however, this revenue is not tracked as a Title V fee or other revenue. WDOE should confirm they are accounting for all Title V revenues and expenses and keeping these revenues and expenses separate from non-Title V accounts.

Other Observations

1. WDOE noted that a regional Title V workshop would be very helpful. Region 10 is considering the timing and format for such a workshop, but would look to state and local permitting authorities in Region 10 to assist in the implementation of such a workshop.
2. Each office tracks only their permit processing progress. EPA will be tracking Title V permit issuance more closely in the near future. WDOE may be asked to report permit issuance progress as frequently as semi-annually. When that happens, WDOE will need to coordinate their reporting between their four Title V offices that issue Title V permits.

H. Title V Benefits

Benefits Identified by WDOE

In response to the program review questionnaire and during the on-site interviews, several WDOE offices identified a number of benefits that have resulted from implementation of the Title V program. Below is a summary of the benefits identified.

1. WDOE's staff has a better understanding of new source performance standard, state implementation plan and minor new source review requirements as well as how to design monitoring terms to assure compliance and how to write enforceable permits.
2. WDOE staff has more complete information about the source universe, facility operations and source emissions as well as the applicability of requirements.
3. Occasionally, the Title V permitting process uncovered compliance issues that were resolved. Permit development identified applicable rules that had not previously been identified.
4. Permittees are devoting more resources (staff, environmental management systems and controls) and attention (self audits and compliance monitoring) to assuring compliance with their permits and the applicable requirements. The facility owners and operators are more aware of the requirements that apply to their facilities, possibly in part due to WDOE working more closely with sources to ensure a common understanding about permit requirements.
5. Title V has resulted in emission reductions in part due to sources becoming synthetic minor sources to avoid the program.
6. WDOE is developing clearer and more enforceable permits and is more able to design enforceable monitoring terms to assure compliance.
7. Title V has resulted air program-wide improvements in records management, enforceability of potential to emit limits, clarity and enforceability of new source review permits, and better documentation of the basis for applicable requirements including those found in past compliance orders.
8. A variety of Title V permit writing skills and techniques (including monitoring, recordkeeping and reporting and the use of a statement of basis) are being used in non-Title V permits (e.g., prevention of significant deterioration, new source review and notices of construction) and Title V information has been used to target compliance and enforcement activities.
9. WDOE specifically acknowledged the benefits of compiling all of the air requirements in one place and requiring industry to monitor and report their compliance status. Specifically, monitoring and compliance certification requirements have improved compliance rates. Even industry has acknowledged the benefit of Title V pertaining to clarity of requirements and expectations and better understanding at their management level.

I. Document Review (Rules/Forms/Guidance)

Good Practices

1. WDOE's web site contains all of their Title V permits and statements of basis, as well as a number of guidance documents that explain the Title V operating permit program. This is a very effective way to make these permit-related documents available to industry and the general public.
2. While not all of WDOE's offices use it, one WDOE office revised WDOE's application form for use with permit renewal applications and made it available on their web site. Given the historically low percentages of technically complete applications, a tailored application may be a good tool for the renewal process. See the comment below for suggested improvements.
3. WDOE has prepared a guidance document titled, "Besides the Permit: A Summary of Air Operating Permit Related Activities." The document is well written and organized and is available on the WDOE web site.

Concerns

1. Title V and WDOE's operating permit regulation specify the elements that must be contained in the permit application form. WDOE should compare the form to the regulation to be sure that the form meets their regulations and Title V.
2. One WDOE office created a draft document titled "AOP Change Determination Key." The document provides guidance on revising permits. While the concept of the document is a good idea, WDOE should review the document for consistency with their permit revisions regulations and revise it accordingly before it is released to the public.

Other Observations

None