Oregon Title V Operating Permit Application Instructions

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State of Oregon
DEQ Department of Environmental Quality

This document was prepared by
Oregon Department of Environmental Quality
Air Quality Division
700 NE Multnomah Street, Suite 600
Portland Oregon, 97232
Contact: Jill Inahara
Phone: 503-229-5696
www.oregon.gov/deq

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800-452-4011 | TTY: 711 | deqinfo@deq.oregon.gov

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Instructions[1]

The Oregon Title V Operating Permit Program requires all major sources to apply for an Oregon Title VOperating Permit (Title V Permit), as established by Title V of the Clean Air Act Amendments of 1990. The requirements of the program are contained in Oregon Administrative Rules (OAR) chapter 340, division 218. If a facility is a major source of any regulated air pollutant, as defined in OAR 340-200-0020, the owner or operator of the facility must apply for a Title Permit using these application forms, unless the facility becomes a synthetic minor source as defined in OAR 340-200-0020.

It is critical that the owner/operator of a major source read all of the General Instructions provided in this section. These instructions explain whether a Title V Permit application must be completed, and, if so, what type of application must be submitted. These instructions further explain the concepts used under Title V and provide recommendations to the owner/operator on how to complete the application forms with an understanding of how these concepts relate to the facility, the facility's permit application, and the Title V Permit.

After reading the General Instructions and upon beginning to complete the actual application forms, the owner/operator should read the entire instructions associated with each application form before completing any part of the form. By reading the instructions associated with the form first, the owner/operator can obtain a solid understanding of the purpose of the form and begin to organize the relevant information appropriately to provide the answers. This will save resources in the long run, helping to avoid redoing all or part of a form because the full range of information sought was not understood from the outset.

Who needs to apply

The Oregon Title V Operating Permit Program applies to major sources as defined in OAR 340-200-0020.

The program extends special application procedures to synthetic minor sources. These are facilities, asdefined under OAR 340-200-0020, that would be classified as a major source due to their potential to emit regulated air pollutants, except for federally enforceable limits on the facility’s potential to emit to below the threshold for major sources. An owner/operator may apply for synthetic minor source status through the Air Contaminant Discharge Permit (ACDP) program with the use of the Simple or Standard ACDP application forms, which may be obtained from the DEQ website. Refer to OAR 340, division 216 for rules regarding ACDPs.

[1] Note that a list of acronyms is provided at the end of the General Instructions for the owner/operator's reference.

A newly constructed facility must first obtain an ACDP to construct before applying for a Title V Permit because these permits only allow for operation, not construction. Unpermitted existing facilities that do not already have an ACDP may apply for an Oregon TitleV Operating Permit without first obtaining an ACDP.

Type of application required

Initial Title V Permit application

All major sources must obtain a Title V Permit and must go through the initial application process. As described above, however, newly constructed facilities that meet the definition of major source must first obtain an ACDP before applying for the Title V Permit. For these sources, the Title V Permit application will be due one year after the initial startup of the source.

Title V Permit Renewal application

An owner/operator renewing an existing Title V Permit must use the permit renewal application procedure. The owner/operator should begin by completing Renewal Application Form AP106. This form then will direct the applicant to other necessary forms that must be completed, depending on the types of changes that have occurred at the facility during the permit term.

The permit renewal applications must be submitted to DEQ in a timely manner, as defined in OAR 340- 218-0130(2). In general, this means that the owner/operator must submit the complete application no later than 12 months prior to the expiration date of the Title V Permit. In some cases, DEQ may determine that it requires additional time to review the permit renewal application of a particular facility. In such an instance, DEQ is responsible for informing the owner/operator, in advance, that the permit renewal application will be required at an earlier date. At no time may DEQ require the permit renewal application to be submitted more than 18 months prior to the Title V Permit's expiration date. If the permit renewal application will be required earlier than the usual 12 months in advance, DEQ must provide the owner/operator at least six months' notice to prepare and submit the permit renewal application.

Title V Permit Modification application

An owner/operator requesting a modification to an existing Title V Permit must follow the permit modification application procedures. Form Series MD900 provide forms designed to accommodate a variety of types of permit modifications. The instructions contain flowcharts that will help the applicant decide which type of permit modification is required for the change the applicant is proposing. The flowcharts will direct the applicant how then to proceed.

Getting help

This document is intended to provide General Instructions as well as specific instructions for completing the Title V Permit application. Other written resources, in addition to this document, are also available.
The following resources are available from DEQ's website:

- DEQ's Oregon Title V Monitoring and Testing Guidance. This document provides guidelines on choosing appropriate monitoring for emissions units and pollutants at the source. The latest version of this document is available upon request.
- DEQ's Continuous Monitoring Manual (April 2015). This document provides DEQ policy oncontinuous monitoring compliance methods and associated requirements.
- DEQ's Source Sampling Manual (November 2018). This document provides DEQ policy on sampling compliance methods and associated requirements.
- Oregon Administrative Rules (OAR), Divisions 12 through 268. These rules set forth air quality regulations in the State of Oregon.

The following materials are available from the EPA eCFR.

- Code of Federal Regulations (CFR):
  - Part 60, Standards of Performance for New Stationary Sources (NSPS);
  - Parts 61 and 63, National Emission Standards for Hazardous Air Pollutants (NESHAP);
  - Part 64, Compliance Assurance Monitoring
  - Part 68, Accidental Release Prevention Program
  - Part 70, Operating Permit Program;
  - Part 72 and 75, Acid Rain Program;
  - Part 80, Stratospheric Ozone Protection
- EPA Office of Air Quality Planning and Standards Technology Transfer Network (OAQPS TTN).This is a network of electronic bulletin boards developed and operated by the OAQPS. This service provides on-line access to information and technology exchange on different aspects of air pollution control, including emission test methods, emission estimate methods, and air pollution models.
- EPA Compilation of Air Pollutant Emission Factors (AP-42). This document provides air pollutant emission factors for many regulated air pollutants from a number of different types of activities.

EPA Compliance Assurance Monitoring Reference Document. This provides guidance regarding monitoring under Title VII of the Clean Air Act.

The owner/operator may also contact her/his assigned permit writer or the Air Quality Division in general at 503-229-5359, for assistance. DEQ encourages the owner/operator to read and carefully consider all instructions in this document and all above-listed resources before calling DEQ for further assistance.

General concepts to understand

The Title V Operating Permit Program is based on state and federal procedural requirements for an owner or operator to demonstrate compliance with all "applicable requirements." No new limits or standards are imposed as a result of the Title V Operating Permit Program. The program will be used, however, to implement standards established under the federal air toxics and acid rain programs. Emissions limits or standards are considered applicable or non-applicable to a source depending on the nature of the "emissions units" and "operating scenarios" used at the facility. These important concepts are explained below.

Applicable requirements

All existing air quality rules are requirements that may apply (applicable) or may not apply (non-applicable) to a facility. For example, if a facility manufactures veneer, the Veneer and Plywood Manufacturing Operations rule (OAR 340-234-0510) is an applicable requirement for that facility but thecrematory incinerator rules in OAR 340, Division 230 would not be applicable requirements.

Some rules apply to all facilities. Examples of such rules include the Highest and Best Practicable Treatment and Control rules (OAR 340-226-0100 through 340-226-0140), the Plant Site Emission Limits rules (OAR 340, Division 222), and the Excess Emissions and Emergency Provision rules (OAR 340-214-0300 through 340-214-0360).

Owners/operators are required to identify in their Title V Permit applications all requirements that are applicable and non-applicable to their operations. The purpose for doing so is three-fold.

- First, the applicable requirements constitute the skeleton of the Title V Permit that DEQ will write. As such, the full range of applicable requirements must be identified in the Title V Permit application so that DEQ will have adequate information to structure the Title V Permit correctly.
- Second, if the owner/operator identifies all applicable and non-applicable requirements, DEQ can grant a permit shield. If the facility is in compliance with all of the conditions in the Title V Permit, the shield protects the owner/operator from third-party lawsuits.
- Third, permitted facilities are required to certify continuous or intermittent compliance with all applicable requirements at least every six months, through the submittal of the Semi-Annual Compliance Certification. The information used to determine compliance will be based on the monitoring required in the Title V Permit, which will be established separately for each applicable requirement. Thus, the owner/operator needs to identify all applicable requirements comprehensively and accurately so that the facility's monitoring activities are appropriate.

Operating scenario

An **operating scenario** is a unique combination of conditions, including equipment configurations and process parameters, under which a facility operates at any given time. For example, at a given point in time, a particleboard manufacturer may have in operation the following pieces of equipment: pre-dryers, boilers, dry dryers, and press lines, in addition to saws, reject lines, shredders, dust bins, and the like. These various pieces of equipment and processes in combination emit certain regulated air pollutants and trigger a series of applicable requirements.

To obtain a Title V Permit for these industrial activities, the owner/operator must describe in the permit application the equipment and processes, the requirements applicable to them, and the pollutants they emit. This comprehensive description becomes the **base operating scenario**--i.e., that configuration of operations from which all other configurations vary. The description of the base operating scenario should be broad enough to include the wide range of equipment configurations, process parameters, and raw materials and fuels used at the facility. Many owners/operators should be able to describe the base operating scenario at their facilities generically enough to avoid defining "alternative operating scenarios," described below.
If the owner/operator uses its equipment or operates its processes in a manner that changes the way inwhich compliance must be demonstrated, or causes different pollutants to be emitted, then the owner/operator may identify these collective new operating conditions as an **alternative operating scenario**. For example:

A boiler designed to burn more than one type of fuel (e.g., coal and natural gas) may be subject to different applicable requirements for the different types of fuels. For example, while burning coal, New Source Performance Standards (NSPS) rules may apply to the boiler; and while burning natural gas, NSPS rules may not apply. The NSPS rules may require recordkeeping and monitoring that may not otherwise be required of the boiler when burning natural gas. In this case, it may be advantageous for the owner/operator to define the two fuel burning conditions as different operating scenarios, such that the NSPS recordkeeping and monitoring will only be necessary when the facility operates under the coal-burning scenario.

Why base an operating permit on alternative operating scenarios?

The Oregon Title V Operating Permit Program recognizes that industrial operations are dynamic. The Title V Permit is intended to allow the owner/operator to conduct the full range of facility operations provided the facility remains in compliance with all applicable requirements. The owner/operator must comply with all applicable requirements and must certify intermittent or continuous compliance with those requirements at least every six months. The inherent variability of industrial processes--for example, the use of a different blend of fuels in a kiln at different points in time can cause different applicable requirements and different compliance demonstration requirements to be triggered at different times. By anticipating this variability through the identification of alternative operating scenarios in the Title V Permit application, the owner/operator can obtain through the Title V Permit the needed flexibility to change the

facility's operating parameters in response to market, raw material, and other pressures, and still remain in compliance with the applicable requirements identified in the Title V Permit. This built-in flexibility is intended to minimize the need for the owner/operator to seek a formal permit modification simply to accommodate typical industrial variability.

Accounting for existing and future changes in operations

The definition of alternative operating scenarios can address both existing and future configurations of equipment and processes. The Title V Permit has a term of five years. Between the time the Title V Permit is issued and the time of its renewal, changes in a facility's equipment and process configurations may occur. To avoid later permit modifications, the owner/operator may consider building anticipated future changes into the permit application. This is possible provided the changes do not increase emissions above the Significant Emissions Rate (see OAR 340-200-0020). If New Source Review or Prevention of Significant Deterioration would be triggered, then the change may not be incorporated into the Title V Permit application.[2]

To account for future facility changes in the Title V Permit application, the owner/operator may define existing versus future alternative operating scenarios. To do so, the owner/operator should follow the instructions provided with Form AP103 for identifying alternative operating scenarios. If the scenario is future, the owner/operator would discuss in the "Description of operating scenario" the nature of the anticipated future changes relative to current operations. In discussing anticipated future changes, the owner/operator should provide as much detail as possible. If adequate detail is provided in the application, any permit modification necessary in the future may be limited to a relatively straight-forward permit revision.

Practical requirements associated with the operating scenario

The owner/operator is required to record contemporaneously the operating scenario under which the facility is operating at a given time. If the owner/operator switches the operation to a different scenario, that change must be recorded. This requirement serves practical inspection, compliance, and enforcement purposes. An inspector entering a facility must know under what operating scenario the facility is operating at that time in order to know what types of activities and emissions to expect relative to the facility's Title V Permit. Variations on an operating scenario do not, however, need to be recorded.

In the context of the Title V Permit application, the owner/operator must provide emissions data, address compliance requirements, and specify operating parameters for the base and all

[2] If the owner/operator wishes to address such a change in the context of preparing the Oregon Title V Operating Permit application, then he/she must address the modification by submitting an Air Contaminant Discharge Permit application at the same time as the Oregon Title V Operating Permit application. The latter application would need to include a compliance schedule to address the modification. Consult DEQ before proceeding.

alternative operating scenarios. In essence, the definition of each alternative operating scenario in the Title V Permit application requires that each scenario in itself become a mini-permit. The owner/operator should balance the need to define all operating scenarios that would assure operational flexibility with the requirements for a more complex Title V Permit application and contemporaneous recording of operating scenario changes during day-to-day operation. The owner/operator's objective in defining different operating scenarios in the Title V Permit application is to obtain adequate flexibility to conduct industrial activities, given their inherent variability, and still be able to demonstrate compliance with all applicable requirements. In this way, the Title V Permit is intended to allow the owner/operator to operate the facility without having to seek a permit modification each time facility operations vary. In most cases, the owner/operator should be able to build in adequate flexibility in the base operating scenario to minimize formal permit modifications.

When should the owner/operator refrain from defining an alternative operating scenario?

At times, for example, the owner/operator may use different fuels to operate a boiler, but the same pollutants are emitted, and the same applicable requirements pertain. Switching fuels may constitute a variation on the source's operating scenario for the boiler; it would not constitute an alternative operating scenario. The different fuels would be variations on the operating scenario, provided all of the variations use the same methods to determine compliance (i.e., fuel usage monitoring) and emit the same regulated air pollutants (just in different amounts). If the owner/operator chooses to define each fuel as an alternative operating scenario, recording changes in scenarios could be frequent and burdensome.

Emissions unit

The Oregon Title V Operating Permit Program requires the applicant to define emissions units as part ofthe Title V Permit application. Each facility may have one or more emissions units.

- An emissions unit may be the combination of one of more pieces of equipment (devices) or processes that all emit the same regulated air pollutant(s);
- trigger the same applicable requirements; and
- share the same compliance demonstration method.

Thus, in grouping devices and processes into an emissions unit, the owner/operator must understand howcompliance will be demonstrated for those grouped devices/processes and how emissions will be quantified.

Some examples of emissions units are as follows:

Example 1: A facility has four identical boilers. All boilers burn the same fuels, emit the same pollutants, and have the same emissions standards. The boilers share a common stack. The

boilers may be grouped as a single emissions unit because a single compliance demonstration method (e.g., source testing) can be used to demonstrate compliance.

Example 2: A facility has four boilers, each with its own stack. One of the boilers is subject to New Source Performance Standards (NSPS) but the other three are not. If the owner/operator wanted to group all four of the boilers as a single emissions unit, then all four boilers must comply with the NSPS requirements, not just the one that is subject to the NSPS.

Example 3: A facility has a boiler and an incinerator. Because different applicable requirements apply tothe boiler than to the incinerator, they cannot be grouped together as a single emissions unit.

Example 4: A facility emits Volatile Organic Compounds (VOCs). For purposes of obtaining the Title V Permit and demonstrating compliance with applicable requirements, the owner/operator may define the entire plant as a single emissions unit for VOCs and will demonstrate compliance through material balance calculations of chemical usage.

Example 5: A facility emits Sulfur Dioxide (SO_2) as a result of burning fuels of high sulfur content. The owner/operator will define the entire plant as an emissions unit for SO_2. Recordkeeping may be used as the compliance demonstration method. To demonstrate compliance with the PSEL for SO_2, the owner/operator will monitor fuel usage at the plant and perform a mass balance of the fuel sulfur content to determine total SO_2 emissions.

Example 6: A facility has two recovery furnaces, two power boilers, a lime kiln, and a smelt dissolving tank vent (SDTV) emitting to a single stack. The kiln has a bypass stack; the boilers do not. The boilersare ducted separately to the stack. All of the devices emit Particulate Matter (PM). There is also an opacity limit on the stack. For purposes of the Title V Permit application, the owner/operator defines the emissions units as follows:

- All of the devices are grouped as a single emissions unit for opacity. Opacity is monitored continuously at the stack.
- The lime kiln is one emissions unit for PM because there is a separate applicable requirement for the lime kiln. Compliance with this limit is demonstrated through source testing at the bypass stack.
- The SDTV has different applicable requirements than the lime kiln, so it is a separate emissions unit for PM. Compliance with this limit is demonstrated through source testing at the duct leading to the main stack.
- The two recovery furnaces have different applicable requirements than the lime kiln and SDTV, so they are a separate, single emissions unit for PM. Compliance with this limit is demonstrated through source testing the main stack simultaneously with the SDTV test. Of the two power boilers, one power boiler idles during the recovery furnace source test, while the other power boiler does not operate. Flow rates from the boiler are accounted for during the testing, but PM emissions from the boiler are considered negligible.

Compliance monitoring

In order to certify compliance with the applicable requirements, the owner/operator must conduct monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. Therefore, in general, monitoring will be required for each emissions unit/applicable requirement combination. The monitoring should be based on existing requirements, if such requirements exist. If monitoring is not specified by an applicable requirement, then the owner/operator must propose monitoring in the Title V Permit application. Due to the complexity of monitoring, DEQ has prepared the Oregon Title V Monitoring and Testing Guidance. It is strongly recommended that the owner/operator read this document before attempting to complete any of the application forms.

Electronic submission

OAR 340-218-0040(1)(b)(A) requires that the Title V Permit application be submitted both in hard copy and an "electronic format as specified by DEQ." To satisfy the electronic filing requirement, DEQ has developed this Title V Permit application package using two software applications: Adobe™ and Microsoft EXCEL™
DEQ recognizes that these software applications have some limitations. In particular, these applications complicate the owner/operator's efforts to provide highly interrelated information to DEQ. To accommodate some of the general limitations of the Adobe and EXCEL software applications in the context of the Title V Permit application process, DEQ has developed a loosely-structured question and answer format for the application package.

DEQ also recognizes that not all owners/operators will have the Microsoft software applications. DEQstrongly encourages the owner/operator to obtain the Microsoft software to complete the application forms, but if it is not possible to obtain the software, other alternatives may be possible. If using other software applications, the owner/operator should convert the Adobe and EXCEL files to their software application, complete the forms, and then save them as Adobe or EXCEL files, if possible. If it is not possible to save forms as Adobe or EXCEL files, then just submit an electronic copy of the files in yoursoftware application format along with the required hard copies.

Some answer sheets are intended to collect information more suited to spreadsheets. These files do not contain equations of any sort, but the owner/operator may insert any equations appropriate to the information being provided (e.g., emissions data calculations).

Submitting the Title V Permit Application to DEQ

The application submittal to DEQ should include the following:

- One hard copy, if required, of all applicable forms and associated attachments; and
- One electronic version of the completed answer sheets submitted by email.

Upon completing the application materials, the owner/operator should review the Application Completeness Checklist, Form MF801, to ensure that all required information has been provided. In assembling the hard copy materials for submittal to DEQ, the owner/operator should refer to Table A below. Table A illustrates the order in which forms and attachments should be collated.

Table A: Oregon Title V Operating Permit Application Structure of Submittal

PRIMARY FORM	ATTACHMENT and SUPPORTING DOCUMENTS
AP101 or AP106 (renewal) – Administrative Information	
AP102 - Facility Description	Map Plot plan Land Use Compatibility Statement (if required)
AP103 - Operating Scenario Description	Process Flow Diagrams
AP104 - Early Reductions Application--Unit Summary	AP105 - Early Reductions Unit—Reductions Demonstration
AP107 - Renewal Pre-application Meeting Request Form	Include this form if you would like to request a pre-application meeting
DV200 - Devices/Processes	Include only those forms applicable to the facility
CD300 - Control Devices	Include only those forms applicable to the facility
AR401 – Applicable Requirements	AR402 - Non-Applicable Requirements AR403 - Facility-wide Applicable Requirements AR404 – ACDP Condition Change Request
EU500 - Emissions Unit Summary	Include only those forms applicable to the facility
ED600 – Emissions Data	ED601 – Categorically Insignificant Activities ED602 – Aggregate Insignificant Activities (if applicable) ED603 - Baseline Emissions Data (if applicable) ED604 – Netting Basis Emissions Data

PRIMARY FORM	ATTACHMENT and SUPPORTING DOCUMENTS
	ED605 – $PM_{2.5}$ Netting Basis ED605A - Requested PSELs ED605S Short-Term Emissions Detail ED606 - HAPs Emissions Data ED607 – Accidental Release/Risk Management Plan ED608 - Stratospheric Ozone Protection
CP700 – Monitoring Forms	Include only those forms applicable to the facility
Other Information	A copy of the current permit (ACDP or Title V)
MF801 - Completeness Determination Checklist	Checklist for the owner/operator in preparing the application

Completing the forms

Overview of the Title V Permit application forms

The Oregon Title V Operating Permit application forms are divided into eight series, as described below.

- **General Information (Series AP100):** These forms ask for administrative information, such as whom to contact at the source regarding the application, and source-wide technical information, such as a general description of the facility and its operations
- **Devices and Processes (Series DV200):** This series provides a number of standardized forms designed to capture technical information about specific devices and processes operating at the facility (e.g., boilers, veneer dryers, painting operations, etc.).
- **Control Device (Series CD300):** This series provides a number of standardized forms designed to capture information about specific pollution control devices at the facility (e.g., wet scrubbers, thermal oxidizers, etc.).
- **Applicable Requirements (Series AR400):** These forms serve two purposes:
    - They help the owner/operator become aware of the applicable requirements he/she must take into consideration when defining operating scenarios and emissions units for the permit application; and
    - They help the owner/operator prepare the lists of applicable and non-applicable requirements necessary to raise permit shield protection.
- **Emissions Units (Series EU500):** These forms allow the owner/operator to provide summary information about each emissions unit.
- **Emissions Data (Series ED600):** This form series captures emissions data by emissions unit and operating scenario. These forms help the owner/operator and DEQ to arrive at the appropriate pollutant- specific Plant Site Emissions Limits for the source.

- **Monitoring (Series CP700):** These forms help the owner/operator identify appropriate monitoring for the applicable requirements.
- **Miscellaneous (Series MF800):** These forms collect additional information to supplement the application. They are generally completed at the end of the application procedure.

Overview of the application decision-making process

The Oregon Title V Operating Permit Program uses a number of interrelated concepts, such as operating scenario, emissions unit, and compliance demonstration point. For example, the definition of an emissions unit affects the choice of monitoring, but monitoring appropriate to the different types of devices, processes, and pollutants in turn constrain the definition of the emissions unit. Therefore, the preparation of the permit application is a highly iterative one. Decisions made to complete one part of the application can drive, and potentially constrain, choices in other parts of the application. DEQ has attempted to provide recommendations on the best way to approach the application process, recognizing its complex nature and the many decisions that must be made along the way.

Because of the iterative nature of the application process, the owner/operator should follow the steps below before attempting to complete the application forms. Following these instructions should assist the owner/operator in preparing the Title V Permit application. Remember that specific technical assistance may be obtained from DEQ by calling the assigned permit writer in the Regional Office.

The owner/operator should bear in mind that his/her objective is to permit the full range of regulated air pollutant-emitting activities at the facility. The Title V Permit should provide maximum flexibility to conduct inherently variable industrial operations. To achieve this objective, the owner/operator still must identify and quantify all pollutant-emitting activities. Further, monitoring must be identified for each applicable requirement.

Step 1: Catalog the facility's usage of raw materials and fuels, production outputs, devices/processes, control devices, and monitoring systems

The best way to begin is first to gain a comprehensive and detailed understanding of the full range ofactivities at the facility by undertaking a thorough inventory of the facility to identify the following:

- The raw materials used at the facility; the fuels used at the facility;
- The products produced by the facility;
- All regulated air pollutant-emitting devices (pieces of equipment) and processes, including VOC-emitting sources;

- The rates at which the devices and processes operate;
- All regulated air pollutants emitted by the devices and processes;
- All existing control devices and emissions control work practices (e.g., wet scrubbers, the watering of unpaved roads); and
- All existing compliance monitoring systems (e.g., stack monitors, flow monitors, etc.).

By identifying all of the above initially, the owner/operator will have obtained most of the information necessary to complete the Title V Permit application. Further, this step provides the owner/operator a comprehensive understanding of the facility's operations and productions, which will be useful for defining operating scenarios in later steps.

Note that the devices and processes with the pollutants they emit, are, in essence, the building blocks of the Title V Permit application. These building blocks carry with them applicable (regulatory) requirements. The way these blocks are arranged relative to their applicable requirements determines how the rest of the application will be completed and how compliance with those applicable requirements will be demonstrated during the permit term.
As the devices and processes at the facility and the pollutants that they emit are identified, the owner/operator should begin to draft the appropriate forms in Series DV200, Devices and Processes, and Series CD300, Control Devices. Note, however, that certain processes are addressed through self-contained emissions unit forms, rather than through individual device/process forms. Form Series EU500 has unique emissions unit forms for painting/coating operations, printing operations, and fugitive emissions. Understanding the devices, processes, and pollutants will help the owner/operator begin to identify all applicable requirements (e.g., an incinerator automatically has a series of regulatory standards that applies to it; if the incinerator was built before or after 1977, different standards additionally may or may not apply according to the New Source Performance Standards).

Step 2: Identify all requirements applicable to the source

The owner/operator now should make a thorough listing of all regulatory requirements that apply to the facility by drafting Form AR401, Applicable Requirements Checklist. Completing this form will begin to provide the owner/operator a sense of all of the requirements that apply to the facility in general and specifically to the devices, processes, pollutants, and control devices identified in Step 1.

Step 3: Preliminarily group the devices and processes into emissions units

With the basic understanding of the devices and processes, acquired in Step 1, and of the source's applicable requirements, acquired in Step 2, the owner/operator should begin to group the devices and processes into what may be the appropriate emissions units. The goal ultimately is to align the devices and processes according to the pollutants emitted, the applicable requirements, and the monitoring method for those requirements. At this point in this

iterative decision-making process, however, the owner/operator will simply be trying to group like devices and like processes that emit the same regulated air pollutant(s), so that he/she can attempt to relate the applicable requirements to these "draft" emissions units to see if the units are appropriate relative to the pollutants they emit, the applicable requirements they trigger, and the monitoring methods.

Step 4: Quantify the emissions from the "draft" emissions units

Now estimate the emissions from the "draft" emissions units identified in Step 3. The owner/operator should identify all regulated air pollutants (see page 24) emitted at the facility. The following resource is provided to assist in this effort:

- A sample Emissions Detail Sheet ED605A Example, completed;

The exercise of estimating the emissions from the draft emissions units will help the owner/operator identify the variables influencing emissions (e.g., different fuel usage, different production rates, etc.), which in turn will help him/her to define the operating scenario(s) at the facility (see Steps 7 and 8, below). As the owner/operator quantifies emissions, however, he/she should also consider the following: Compliance Assurance Monitoring requirements; New Source Review/Prevention of Significant Deterioration (NSR/PSD); and emission fees.

Compliance Assurance Monitoring (OAR 340-212-0200 through 340-212-0280 Compliance Assurance) requirements apply to any emissions unit/pollutant combination for which compliance with an applicable requirement adopted prior to November 15, 1990 is achieved by means of an add-on control device and the pre-controlled potential emissions would exceed 100 tons per year. In addition, CAM only applies to applicable requirements promulgated prior to November 15, 1990. For any emissions unit that triggers CAM, the owner/operator must implement CAM procedures. Recognize that emissions units may be defined in such a way as to attain full compliance with Title V Permit requirements and not trigger CAM, depending on how the emissions units are configured around devices and processes. The flexibility to configure devices and processes in emissions units is, of course, constrained by the applicable requirements and monitoring that apply to those devices and processes and to the regulated air pollutant(s) at issue.

If an emissions increase greater than the Significant Emissions Rate (SER) for the pollutant in question isrequested, applicants should refer to the PSEL rules (OAR chapter 340, division 222) and the New Source Review rules (OAR chapter 340, division 224) for the correct procedures.

Step 5: Identify the applicable requirements that apply to the "draft" emissions units

In Step 3, the emissions units were preliminarily identified. In Step 2, all applicable requirements for the facility were identified. Now the owner/operator should examine the Form AR401 drafted in Step 2 to identify which of the applicable requirements answered "Yes" on that form apply to the emissions units drafted in Step 3 and emissions quantified in Step 4. Notice that Form

AR401 marks those applicable requirements that must be addressed in the Title V Permit application at the level of the emissions unit. Examine all the marked applicable requirements on Form AR401 relative to the draft emissions units and the devices/processes therein. The owner/operator must ensure that the devices/processes grouped within the draft emissions units are entirely compatible with respect to the different applicable requirements they trigger. If the owner/operator finds, for example, that different applicable requirements apply to different components of the draft emissions units (e.g., one of the draft emissions units consists of a boiler and an incinerator, and different standards apply to boilers than to incinerators), then he/she will need to repeat Step 3 to re-group the devices and processes into different emissions units that are appropriate relative to the applicable requirements for the devices/processes.

Step 6: What monitoring is appropriate for the "draft" emissions units

Having preliminarily identified the emissions units in Step 3 and the associated applicable requirements in Step 5, now examine the appropriate monitoring for these emissions units. The owner/operator may have found, in conducting Step 5, that certain monitoring is already required by rule or an existing ACDP condition. If monitoring has not been previously established, the owner/operator will need to propose monitoring appropriate for the emissions units keeping in mind that the monitoring should be the same for all devices/processes within the emissions unit. The owner/operator will need to review Form Series CP700 and the reference materials available from DEQ and EPA (sec section IV) to determine what monitoring is appropriate for the emissions units.

In the Title V Permit application, the owner/operator will complete at least one monitoring form for each emissions unit.[3] Thus, all of the devices and/or processes in that emissions unit must share the same monitoring for a given pollutant or parameter. As the owner/operator determines the appropriate monitoring, he/she should also identify the monitoring points. If the owner/operator finds that the draft emissions units "don't work" for purposes of monitoring--for example, different devices within the unit require different monitoring--return to Step 3. Otherwise, proceed to Step 7.

Step 7: Identify the base operating scenario

Based on the understanding gained through the previous steps of the configurations of devices and processes at the facility, the pollutants those devices and processes emit, the applicable requirements thatpertain to the emissions units defined for those devices, processes, and pollutants, and the factors that influence emissions from the units, the owner/operator now should be able to define the base operating scenario (see the discussion of Operating Scenarios on page 10).

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[3] In cases in which pollution prevention is used to help assure compliance for a particular emissions unit, the owner/operator would complete two Monitoring forms for the emissions unit: one CP708, Pollution Prevention, and one other form.

The base operating scenario is the primary configuration of devices and processes at the facility that emitcertain regulated air pollutants and trigger a particular combination of applicable requirements. The basescenario should reflect current, normal operating conditions, including raw materials usage and process rates.

An owner/operator of a facility with highly variable and complex operating parameters may consider defining as the base operating scenario a combination of the worst-case emissions for all of the variables in their operation. For example, a boiler burns a combination of sanderdust, natural gas, and distillate fuel oil. In calculating PM_{10} and NO_x emissions, the worst-case emissions would occur when the boiler burns entirely sanderdust. For SO_2, the worst-case emissions would occur when the boiler burns entirely distillate fuel oil. Thus, the base operating scenario could account for all types of fuels if the owner/operator establishes the pollutants' emissions limits based on the worst-case emitting fuel.

Some owners/operators may be unable to anticipate the full range of variability that they may encounter with their emissions units. For example, a cement kiln may burn any number of fuels: basically, whatever is available in large enough quantity, at a low enough price, with the correct physical/chemical properties.The owner/operator of the kiln may not want to be tied to a Title V Permit that says that he/she can only use any combination of four (or eight, etc.) specified fuels. Rather, he/she may want to be permitted to use in the kiln any fuel that is available. To obtain that type of flexibility through the Title V Permit, DEQ shall require the owner/operator to demonstrate that he/she will use fuels that meet some set of criteria as a means of ensuring compliance with emissions requirements. Thus, for example, the owner/operator may establish a base operating scenario that uses any blend of fuels provided that the input to the kiln does not exceed permitted concentrations of metals and organics. The owner/operator's definition of the operating scenario would need to describe how fuel usage would be monitored to ensure compliance with the fuel concentration limits and/or how additional emissions monitoring would be used to ensure compliance.

Step 8: Identify alternative operating scenarios (if applicable)

After completing Steps 1 through 7, evaluate the need to identify alternative operating scenarios. As described on page 10, it may be necessary to define one or more alternative operating scenario to provide the flexibility necessary to operate for the permit term without necessarily having to modify the permit. In identifying the alternative operating scenarios, it will be necessary to repeat Steps 2 through 7 to identify how the alternative scenario differs from the base. In so doing, it may be necessary to re-define one or more of the emissions units originally defined in the base operating scenario to reflect more appropriately the parameters of the alternative operating scenario.

Step 9: Repeat as necessary

Because of the highly iterative nature of the decisions required in the permit application, the owner/operator may need to repeat Steps 2 through 7 before determining exactly how to

complete the application forms for submittal to DEQ. Once the decisions have been finalized through the steps above,the owner/operator should proceed with completing the submittal version of the application forms. A recommended process for completing the forms is described below.

Completing the application forms

Once all of the operating scenarios, emissions units, applicable requirements, and monitoring have been identified and finalized, the owner/operator should complete the submittal version of the application forms. DEQ recommends that the application forms be completed in the following order. This order is suggested based on the decisions made through the steps outlined in the previous section, in recognition of the complex interrelationships that exist among the application forms and the concepts therein.

1. Form Series AP100, General Information. Specifically, first complete the following forms within this form series. This will provide the general administrative information about the facility. However, the forms shouldnot be signed until the application is completed and thoroughly reviewed for accuracy.
   - Form AP101 or AP106 (renewals), Administrative Information.
   - Form AP102, Facility Description
   - Form AP103, Operating Scenario Description

2. Form Series DV200, Devices and Processes. These forms document the devices and processes at the facility to create the "building blocks" of the Title V Permit application. The owner/operator should complete these forms to help him/her construct the emissions units. Note that certain processes at the facility--printing operations, painting/coating operations, and fugitive emissions--do not have device/process forms. Rather, they have discrete emissions unit summary forms (see item 5, below).

3. Form Series CD300, Control Devices. These forms document the control devices at the facility.

4. Form Series AR400, Applicable Requirements. These forms document the applicable requirements at the facility.
   - AR401, Applicable Requirements Checklist, contains all air quality rules pertaining to emissions units and/or facilities. This form will have been drafted under Step 2 of the previous section. The owner/operator now should finalize it.
   - AR402, Non-Applicable Requirements, provides for further explanation of those non-applicable requirements identified on Form AR401.
   - AR403, Facility-Wide Applicable Requirements, captures those applicable requirements marked with a ■ on Form AR401, for which "Yes" (i.e., the requirement does apply) was marked.These requirements include PSELs, fuel usage requirements, etc.
   - AR404, ACDP Condition Change, provides the opportunity for the owner/operator to request changes in existing ACDP conditions that should not be carried over into the Title V Permit.

5. Form Series EU500, Emissions Unit Summary. These forms summarize the structure of each emissions unit defined by the owner/operator. Each Emissions Unit Summary form captures the following information about the emissions unit:

   - General information (e.g., identification number or label, description, and operating scenario); devices, processes, and control devices;
   - Pollutant emissions; and
   - Applicable requirements along with monitoring methods and current compliance status

Through this structure, the Emissions Unit Summary forms are highly interdependent with the Monitoring forms, discussed under item 7 below: to complete the Emissions Unit Summary, the owner/operator will need information from the Monitoring form; but to complete the Monitoring form, it is necessary to know about the emissions unit. Due to the interrelatedness of the forms, DEQ recommends that the Emissions Unit Summaryforms and Monitoring forms be completed concurrently.

- EU501 is a generic Emissions Unit Summary form. Use this form to represent the emissions units constructed from the devices and processes identified in Form Series DV200.
- EU502 is a Painting or Coating Operation Emissions Unit Summary form. Complete this form once for painting and coating operations at the facility.
- EU503 is a Printing Operation Emissions Unit Summary form. Complete this form once for printing operations at the facility.
- EU504 is a Facility-Wide VOC Material Balance Emissions Unit Summary form. If the entire facility has been defined a single emissions unit for purposes of VOC material balance, use this form.
- EU505 through EU508 are Fugitive Emissions Unit Summary forms, tailored as follows:
  - EU505 is for storage piles emitting fugitive particulate or VOCs.
  - EU506 is for materials handling activities emitting fugitive particulate or VOCs.
  - EU507 is for unpaved roads emitting fugitive particulate.
  - EU508 is for industrial paved roads emitting fugitive particulate.
- Form Series ED600, Emissions Data. These forms collect information about the emissions of all regulated air pollutants, and about the usage of a certain subset of those pollutants. This is explained in detail in the introduction to the form series. Also review the discussion of PSELs, beginning on page 24, and the discussion of Hazardous Air Pollutants, on page 30.

6. Form Series CP700, Monitoring. The owner/operator will need to complete at least one Monitoring form for each emissions unit identified in Form Series EU500. However, a single monitoring form may be used for multiple emissions units in the event the same monitoring is used at all of the emissions units. In the event that pollution prevention is used to help achieve compliance, the owner/operator will also complete the pollution prevention form. The owner/operator is advised to complete this form simultaneously with the Emissions Unit Summary forms, as described above under item 5. The monitoring forms are as follow:

- CP701, Continuous Monitoring System; CP702, Stack Testing;
- CP703, Highest and Best Practicable Treatment and Control – Operation and Maintenance Monitoring;
- CP704, Periodic Visible Emissions Monitoring; CP705, Maintenance Activities;
- CP706, Fuel Sampling and Analysis; CP707, Material Balance;
- CP708, Pollution Prevention;
- CP709, Compliance Assurance Monitoring; CP710, Recordkeeping; and
- CP711, Plant Site Emissions Monitoring.

7. Form Series MF800, Miscellaneous. This final series collects some last requirements for the Title V Permit application. It includes the following: MF801, Completeness Determination Checklist, required of all facilities.

Plant site emissions limits

The information is provided as helpful reference for Title V Permit applicants. It is, by no means, an exhaustive summary. For more information, contact the permit writer in the appropriate Regional Office.

All Oregon Title V Operating Permits must include Plant Site Emission Limits. The PSEL, as defined in OAR 340-200-0020, refers to the "total mass emissions per unit of time of an individual air pollutant specified in a permit for a source." Under the Air Contaminant Discharge Permit program and the Oregon Title V Operating Permit program, DEQ permits sources to emit specified regulated air pollutants, for which they have a potential to emit, in a certain quantity on an annual basis. In addition, DEQ limits short term emissions of some pollutants for sources located in areas where a shortterm significant emission rate has been established.

Pollutants subject to PSELs

PSELs apply to the following pollutants:

- Criteria pollutants:
- Particulate Matter (PM)
- Particulate Matter less than 10 microns (PM_{10})
- Particulate Matter less than 2.5 microns ($PM_{2.5}$)
- Sulfur Dioxide (SO_2)
- Nitrogen Oxides (NO_x)
- Carbon Monoxide (CO)
- Volatile Organic Compounds (VOC)

- Lead (Pb)
- Pollutants from certain source categories under the New Source Performance Standards:
- Fluorides
- Sulfuric Acid Mist Hydrogen sulfide
- Total reduced sulfur, including hydrogen sulfide Reduced sulfur compounds, including hydrogen sulfide
- Municipal waste combustor organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans)
- Municipal waste combustor metals (measured as particulate matter)
- Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride)Municipal solid waste landfill emissions (measured as nonmethane organic compounds)
- Greenhouse gases (the PSEL is established for the sum of the following greenhouse gases on a carbon dioxide equivalent basis, CO_2e, and not for the individual greenhouse gases)
    - Carbon dioxide
    - Nitrous oxide
    - Methane
    - Hydrofluorocarbons
    - Perfluorocarbons
    - Sulfur hexafluoride

In addition, PSELs may also be applied to hazardous air pollutants if requested by the facility. Information on HAPs is collected in this permit application and will be used:

- to determine whether the facility is a major source for HAPs; and
- if the facility is a major source, to determine which MACT standards apply.

Example: A facility is a major source for HAPs based on potential to emit. The owner/operator, however, does not want the facility to become subject to Division 244 requirements for HAPs. The owner/operator will seek a PSEL for aggregate HAPs that will restrict emissions levels such that the source becomes "synthetic minor" for HAPs.

Annual PSELs

The rules require that the Title V Permit have PSELs on at least an annual basis. Annual periods are defined as each 12- consecutive calendar month period. The annual PSEL should be based on projected annual, normal production levels. "Normal" is defined as the usual levels of production expected for a device/process in a year. "Normal" should take into consideration the highest level that the device/processwould be expected to achieve in any annual period during the permit term.

PSELs are based on the information provided in the ED600 series forms using the best emissions information available. This may be actual emission data from continuous monitoring systems, materialbalances, periodic test data, or estimated emissions based on emissions factors from AP-42.

Short-Term PSELs

For some sources in the Medford/Ashland Air Quality Maintenance Area, the rules require that the Title V Permit have a short-term PSEL in addition to the long-term, annual PSEL. While the annual PSEL should be based on projected annual normal production levels, the short-term PSEL should represent emissions levels at peak production. Thus, using the example of a daily limit, the short-term PSEL would reflect maximum daily production. The short-term limit should not represent a production level that would be sustained for the entire year. Rather, by setting the short- term limit to reflect maximum production, it acts as a "red flag" to the owner/operator that, if the short- term limit is reached, operations are above normal and continued operation at that above-normal level will result in exceeding the annual PSEL.

Emission factors used to set the PSELs also may be different for the long- and short-term. In general, anemission factor based on average emissions is used for setting the long-term PSEL, while an emission factor based on maximum emissions is used to set the short-term PSEL.

Example: Previous tests of a boiler indicate that CO emissions vary between 1 and 3 pounds for every 1,000 pounds of steam produced. The owner/operator would base the short-term PSEL for the boiler on the high emission factor (i.e., 3 lbs/1,000 lbs steam). The long-term PSEL would be based on the average emission factor (i.e., 2 lbs/1,000 lbs steam).

The timeframe for the short-term PSEL (i.e., hourly, daily, weekly, monthly) is linked to the compliance monitoring method. In general, the short-term emissions limit is set on a one-hour basis to correspond with common testing methods for demonstrating compliance. Hourly compliance demonstrations, however, may not be appropriate for certain activities at the facility. Whenever possible, the timeframe of the short-term limit should not be longer than the shortest timeframe for the pollutant in question under the Ambient Air Quality Standards (AAQS) (OAR chapter 340, division 202). In a limited number of cases, particularly for owners/operators of VOC sources using material balance as the compliance demonstration method, a short-term limit within the AAQS timeframes may not be possible. In that event, the owner/operator must demonstrate to DEQ's satisfaction why the AAQS timeframe is unachievable andthat a specified alternative timeframe is the shortest achievable. DEQ then will establish a short-term emissions limit that can be verified through monitoring that is compatible with facility operations.
The owner/operator may request a short-term compliance period longer than hourly provided that *both* ofthe following conditions are met:

1. the requested period is consistent with the monitoring of any other applicable requirement and thePSEL requirement; and
2. the requested period is no longer than the shortest period of the Ambient Air Quality Standards for the pollutant, which shall be no longer than daily for VOC and NO_x; or, the

owner/operator demonstrates that the requested period, if longer than the shortest period of the Ambient Air Quality Standards for the pollutant, is the shortest period compatible with facility operations.

Some examples of acceptable short-term PSELs follow.

Example: A boiler emits particulate matter. The typical compliance demonstration method for particulate matter from the boiler is stack testing. The particulate short-term PSEL likely would be hourly due to the source testing requirements.
Example: An unpaved road is a source of fugitive particulate emissions. The emissions are caused by vehicle travel on the road. A practical particulate short-term PSEL for the unpaved road would be daily orweekly, with the owner/operator keeping records of the vehicle miles traveled each day or week.

Example: A wood storage pile is a source of fugitive VOC emissions. The pile is disturbed relativelyinfrequently. A VOC short-term PSEL for the pile likely would be monthly, with the owner/operator tracking the pile size on a monthly basis.

In the context of the Title V Permit application, information for the Short-Term PSEL is captured on Form ED605S, Short-Term Emissions Detail.

Baseline, Netting Basis, and Requested PSELs

Depending on when the facility began operating, the owner/operator may need to provide historic emissions data in this permit application. Specifically, facilities that operated in the baseline period need to report their baseline emission rate. Additionally, facilities that have had their baseline emissions reduced due to the adoption of subsequent rules or have undergone New Source Review (NSR) or Prevention of Significant Deterioration (PSD) must provide emissions data for their Netting Basis.

Facilities that did not operate in the baseline period and have not undergone NSR or PSD, need onlyprovide data on their requested PSELs.

Note that the ACDP may not have contained PSELs for all regulated air pollutants for all emissions units that the owner/operator will identify in the permit application. If this is the case, the owner/operator is required to submit in this application baseline and netting basis information, if applicable, and requestedPSEL information for the "new" emissions units.

Baseline Emission Rate

The baseline period for any pollutant besides greenhouse gases is any 12-consecutive calendar month period during 1977 and 1978, depending on the operations of the facility. DEQ may allow the use of a prior time period upon determination that it is more representative of normal operation. For greenhouse gases, the baseline period is one consecutive 12 calendar month period during the calendar years 2000 through 2010.

Those facilities that operated during the baseline period have a baseline emission rate calculated based on their actual emissions during a specified 12-month period. The emissions are calculated based on the actual production levels, steaming rates, and operating schedules during the 12-month period. Baseline emissions will not be calculated for fine particulate matter ($PM_{2.5}$). See the "Instructions for Determining the $PM_{2.5}$ Plant Site Emission Limit and Netting Basis" for more detail on calculating the $PM_{2.5}$ netting basis and PSEL. To calculate a baseline emission rate and PSEL for GHGs, see the Fuel Combustion Greenhouse Gas Calculator.
In the context of the Title V Permit application, information on the baseline emissionsis captured on Form ED603, Baseline Emissions Data.

Netting Basis

The Netting Basis is defined as the baseline emission rate MINUS any emission reductions required by rule, orders, or permit conditions required by the State Implementation Plan (SIP) or used to avoid SIP requirements, MINUS any unassigned emissions that are reduced from allowable under OAR 340-222- 0045, MINUS any emission reduction credits transferred off site, PLUS any emission increases approved through the New Source Review regulations, MINUS any emissions reductions required for NSR/PSD sources permitted after May 1, 2011 and where the netting basis initially equaled the potential to emit for a new or modified source. The Netting Basis, therefore, applies to any source that operated during the baseline period or has undergone NSR or PSD review.

To ensure that the NSR/PSD program is protective, companies are required to evaluate the air quality effects that would occur if a new or expanded facility operated at its capacity. Once this level is approved, it is also added to a facility's netting basis even though the facility may never actually operate at that level. This unrealistically high starting emission level could allow a future expansion to avoid NSR/PSD.To address this concern, a process to reset the netting basis once a new or expanded facility has been operating to establish a realistic level has been added to the regulations.

This reset applies to NSR/PSD permits issued after May 1, 2011 and to GHG sources whose baseline emission rate will initially equal the potential to emit of equipment that has been approved for construction prior to December 31, 2010 but has not yet begun normal operations by January 1, 2011. For these sources and/or equipment that are permitted at their PTE, the netting basis and the PSEL will need to be tracked separately from the existing netting basis and PSEL of existing equipment.

The netting basis will be reset from PTE to the highest actual emissions during the 10 years after NSR/PSD permit issuance. An additional 5 years may be granted if it is demonstrated that a source had not achieved normal operations within the 10 year period. The process would not limit the ability of the facility to operate permitted equipment, but would prevent use of the added netting basis until the level is reset. This adjustment does not require a reduction in the PSEL so

a source will still be able to utilize the full capacity of a unit that went through PSD without triggering PSD again. The reset provision is not retroactive.

DEQ is aware that this change may be a disincentive for sources to voluntarily implement early reductions. Therefore, the rules include a provision for sources that voluntarily implement pollution prevention practices or operational, maintenance and work practice requirements in accordance with OAR340-226-0110 and 0120. See the section on Highest and Best on page 31. Emissions reductions required to reduce PTE to actual emissions will not include reductions achieved through these mechanisms. This provision will continue the program's incentive for voluntary early reductions and remove the disincentive for maintaining maximum emissions to preserve netting basis.

In the context of the Title V Permit application, information for the netting basis is captured on Form ED604, Netting Basis Emissions Data and, for $PM_{2.5}$, on Form ED605, $PM_{2.5}$ Netting Basis.

Requested PSELs

All Title V Permit applicants will request the PSELs for which they wish to be permitted for the permit term. These limits will be requested in detail on Form ED605A, Requested Annual Plant Site Emission Limits. Facilities in the Medford-Ashland Air Quality Maintenance Area may also have short-term (daily) PSELs and therefore need to also submit Form ED605S, Short Term Emission Detail.

The owner/operator of a facility already permitted under the Air Contaminant Discharge Permit (ACDP) program may request the current permitted limits or may choose to request increases in their PSELs (and,as noted above, also must request PSELs for newly identified emissions units). The owner/operator may, through this Title V Permit application, request increases from his/her current permitted levels provided that the increases do not trigger NSR/PSD. If NSR/PSD is triggered, then the owner/operator must apply to the appropriate DEQ regional office for a new ACDP. This should be done before submittal of the Title V Permit application, and DEQ should be notified as quickly as possible that this will be done. If it is not possible to submit the ACDP application for an NSR/PSD permit before submitting the Oregon Title V Operating Permit application, consult DEQ before proceeding.

New facilities seeking a permit for the first time will need to establish PSELs through the Title V Permit. The allowable PSEL for a new facility constructed after 1978 is established by calculating projected emissions at full operation or at the highest projected annual production level, over the five-year permit term. The projected emissions rate must reflect the facility's compliance with all applicable rules in effect at the time that the application is submitted. If the owner/operator requests emissions levels that reflect less than full operation, DEQ will issue the PSELs for no more than the level requested.

Unassigned emissions

Some facilities may no longer have the capacity that existed in the baseline period. The difference between the current capacity and the netting basis is called unassigned emissions. This typically occurs because the facility is operating more efficiently or has eliminated a pollutant emitting activity or added emission reducing controls or practices, thus reducing the potential to emit below the netting basis.

Unassigned emissions do not qualify as emission "credits" and cannot be banked, traded, or sold externally. Rather, unassigned emissions can only be used on-site. Unassigned emissions are established at permit renewal. Once established, unassigned emissions are available until the next permit renewal. Any remaining unassigned emissions at the next permit renewal will be reduced to the significant emission rate.

If there are unassigned emissions, the owner/operator should create a line item called "unassigned emissions" on Form ED605A and ED605S, and enter the associated emissions level for the appropriate pollutant(s).

For emission reductions that have occurred in the past two years due to permanent shutdown or over- control of an emissions unit, the owner/operator should consider establishing emission reduction credits that can be banked for up to 10 years. Emission reduction credits may be used on-site or at other sources to off-set emission increases. Credits that are not used by the end of the 10 year banking period will convert to unassigned emissions and be available to the facility for another 5 years.

If there are emission reduction credits, the owner/operator should create a line item called "emission reduction credits" on Form ED605A and ED605S, and enter the associated emissions level for the appropriate pollutant(s).

Hazardous air pollutants

Division 244 of DEQ's air quality regulations includes requirements for facilities that emit any of the 188 hazardous air pollutants listed in OAR 340-244-0040, Table 1.

Quantifying emissions

All Title V Permit applicants are required to quantify the facility's HAP emissions regardless of whether or not the facility is a major source for HAPs. Form ED606 should be used for this purpose. The owner/operator should recognize that, once a facility is considered a major source for one pollutant, the owner/operator must still calculate emissions for all other regulated air pollutants.

The owner/operator is required to calculate the "potential to emit" of each HAP. The potential to emit is based on the facility's maximum operating capacity (i.e., operating at maximum throughput, 24 hours/day, 365 days/year), taking into account any physical or operational limitations on the capacity, including air pollution control equipment. The emissions calculations

should be based on the "worst case" operating scenario (refer to the discussion of operating scenario on page 10). If emissions of any one HAP are 10 tons per year or more, or the sum of the emissions of all HAPs is 25 tons per year or more, then the facility is considered a major source of HAP and is subject to one or more rules in OAR chapter 340, division 244. If the HAP emissions are less than the 10 or 25 ton thresholds, the facility still may be subject to an emission standard under OAR 340-244-0210 and 340-244-0220 but is not currently required to obtain a Title V Permit, unless otherwise subject to the program.

Applicable requirements

The applicable requirements that apply to major HAP sources will primarily be contained in the maximum control technology emission standards (40 CFR Part 63). The MACT standards may include a wide range of control strategies consisting of process changes, material substitutions, pollution control equipment, work practice changes, pollution prevention techniques, or improved operator training. In many cases, more than one MACT standard will apply at a given facility. Applicants should examine the applicability clause of each MACT standard that addresses a process or operation at the applicant's facility. Each MACT standard also contains the compliance demonstration requirements.

Under OAR 340-244-0200 and 340-244-0210 the term "Federal MACT" refers to a standard for major sources that has been promulgated by EPA. The applicable MACT standard will be incorporated into the facility's Oregon Title V Operating Permit as an applicable requirement. The term "State MACT" refers to a case-by-case determination of the MACT standard by DEQ when no MACT standard has been promulgated by EPA for the given source category. DEQ will establish "State MACT" standards for new or reconstructed sources that submit an application prior to EPA promulgating a MACT standard for the source category. For existing major sources, DEQ is required to establish “State MACT” in the event that EPA does not establish a “Federal MACT” for the source category by the scheduled date in the Clean Air Act. Sources subject to “State MACT” must submit a two part application. The first part, which merely identified which sources are subject to the “State MACT” requirement, was due on May 15, 2002. The second part, which will include information sufficient to establish a “State MACT” standard, will be due in accordance with a schedule established by EPA. Similar to a BACT (Best Available Control Technology) analysis conducted under the Prevention of Significant Deterioration program, the owner/operator will be required to conduct an analysis of the control strategies achievable and propose anemission standard that meets the MACT criteria. DEQ will provide forms for submitting the necessary information.

Highest and Best

In most cases, Highest and Best was addressed when the ACDP was issued and any applicable requirements as a result of that analysis were included in the Title V Permit. The discussion provided below is for those facilities that Highest and Best was not addressed. It is also provided because Highest and Best can also be used to satisfy the requirements for “periodic monitoring’as required by the Title V Permit program.

Highest and Best Practicable Treatment and Control, originally adopted in 1972 as part of Oregon's State Implementation Plan, was amended on Oct. 29, 1993 to clarify requirements. The amendments became effective on Jan. 1, 1994. The 1972 rule provided broad authority for DEQ to require installation of emission reduction devices and processes, and to require that these devices and processes be properly maintained and operated to minimize emissions. It applied to all facilities, both permitted and unpermitted. New facilities could be subject to more stringent standards under Highest and Best than existing sources, and the standards for future new facilities could be even tighter as further control became practicable. The rule applied to all pollutants, including air contaminants, visible pollutants, odors, soiling agents and other "deleterious factors". It applied in nonattainment areas to improve air quality, attainment areas to prevent degradation of existing air quality, and all areas to protectvisibility. It was supplemental to all other emission standards, both state and federal.

Since the original adoption of Highest and Best in 1972, the Environmental Quality Commission (Commission) has adopted a number of more specific emission control requirements including RACT, BACT, LAER, NSPS, NESHAP, and a number of industry-specific and pollutant-specific requirements. These standards apply to some of the sources, pollutants and areas of the state regulated by Highest and Best. In general, DEQ has determined that compliance with these specific standards satisfies Highest andBest. However, emission limits in addition to these specific standards have been required under Highest and Best in some cases to reflect the capability of air pollution control equipment, to prevent violation of an ambient air quality standard, or to establish emission standards for emission sources that are not otherwise regulated. Highest and Best has also been used to ensure that emission reduction devices and processes are properly operated and maintained. As such, Highest and Best can also be used to satisfy the periodic monitoring requirements of the Title V Permit program.

Prior to the amendments, a number of specific terms or conditions were included in ACDPs under the authority of Highest and Best. For example, all ACDPs issued prior to January 1, 1994, include a requirement (condition 1) for proper operation and maintenance under the authority of Highest and Best.In some cases, an emission limit more stringent than an otherwise applicable standard may have been required under Highest and Best. Highest and Best also has been used to establish emission limits where there is no applicable rule for criteria pollutants and hazardous air pollutants.

As specified in OAR 340-226-0100(5), the amendments to Highest and Best do not revoke or modify any existing permit term or condition unless or until DEQ revokes or modifies the term or condition. All such terms or conditions should be carried forward to a renewed permit unless:

- The permit writer determines that the term or condition should be modified or revoked because it has been replaced by another requirement, the emissions unit has been taken out of service, or a change is otherwise warranted; and
- Modifying or revoking the term or condition would not result in a violation of a requirement under the State Implementation Plan (SIP).

For example, a Highest and Best term or condition could not be revoked if it was relied upon to ensurethat an offset was federally enforceable. As another example, a source-specific SIP revision or a new attainment demonstration could be required if a Highest and Best term or condition were modified to increase the emission rate for a source in a nonattainment area. Highest and Best may be achieved by either pollution prevention or operation and maintenance requirements. Provided below is a discussion of these two aspects of Highest and Best.

Highest and Best through pollution prevention

OAR 340-226-0110 encourages applicants to take into account the overall impact on risk when selecting a control method, considering risks to all environmental media and risks from all affected products and processes. Often, overall risk can be reduced by using pollution prevention instead of add-on control devices. In some cases, selection of a control method with higher emissions may be appropriate if overall risk is lowered considering impacts on water and waste.

OAR 340-226-0110 also encourages applicants to utilize the following pollution prevention hierarchy incontrolling air contaminant emissions:

- Modify the process, raw materials or product to reduce the toxicity and/or quantity of air contaminants generated;
- Capture and reuse air contaminants;
- Treat to reduce the toxicity and/or quantity of air contaminants released; or Otherwise control emissions of air contaminants.

DEQ will accept any control method which is capable of meeting applicable emission standards and complies with all applicable state and federal requirements, but methods higher on the hierarchy should be encouraged.
Refer to Form Series CP700, Compliance Demonstration, for details on demonstrating pollution prevention in the Oregon Title V Operating Permit application.

Highest and Best through operation and maintenance

Condition 1 of all ACDPs issued before Jan. 1, 1994, states:

The permittee shall at all times maintain and operate all air contaminant generating processes and all air contaminant control equipment at full efficiency and effectiveness, such that the emissions of air contaminants are kept at the lowest practicable levels.

In some cases, specific operational parameters have also been included in permits, such as the secondary combustion chamber minimum temperature for thermal oxidizers. In other cases, specific emission limitations, such as opacity limits, have been included to ensure that emission control devices operate at an efficient level.

Effective Jan. 1, 1994, operation and maintenance requirements will be established under OAR 340-226-0120. This rule establishes two methods of specifying O&M requirements, and requires that one or both be included in permits where appropriate to ensure that emission control devices are operating efficiently and effectively. These methods are as follows:

- Include specific operational, maintenance, or work practice requirements where appropriate for each emission unit. These should be used where they can be clearly identified and quantified, andwhere they will be effective. Normally, they will be selected in cases where the source will demonstrate compliance with an emission standard by parametric monitoring, maintenance procedures, or recordkeeping.
- Establish emission action levels where specific operational, maintenance and work practice standards are not sufficient to ensure effective and efficient operation. These are not emission standards, but are emission levels which indicate a potential problem in operation or maintenance. If emissions equal or exceed emission action levels, corrective action must be taken by the owner/operator. Normally, emission action levels should be selected when the owner/operator will demonstrate compliance with an emission standard by emission monitoring, i.e., continuous emissions monitoring or stack testing.

If the emissions from an emissions unit can vary by changes in the operation or maintenance of airpollution control equipment or emission reduction processes, the owner/operator should, where appropriate, propose O&M requirements and/or emission action levels. These must be specified in the EU500 forms and Form CP703 to ensure that a source is operated and maintained at the "highest reasonable efficiency and effectiveness to minimize emissions." The following steps are provided forhelping to determine if O&M requirements are appropriate.

Step 1: Determine if the efficiency or effectiveness of the control device or emission reduction process can be varied significantly by changes in operation or maintenance. This would be true if the variation could result in a significant emission increase above the emissions at highest reasonable efficiency and effectiveness (e.g., over 10% increase). The significance of the variation should be considered for the sameaveraging times as any applicable standards (e.g., lbs/hr, tons/yr). If the variability is significant, continue with step 2. If the variability is not significant, then O&M requirements are not necessary.

Step 2: Determine if an O&M requirement would be different from applicable emission standards. For example, if a parameter range which is specified to demonstrate compliance with a standard is the same as the range that would be specified to demonstrate highest reasonable efficiency and effectiveness, an O&M requirement would not be necessary. Similarly, if compliance with the standard is demonstrated by keeping records that a specified VOC content raw material is used, an O&M requirement would generally not be needed (an exception would be if a lower VOC content raw material represented proper operation). In other cases, proper operation would require a different parameter range or procedure than would be required just to comply with the standard. For example, a venturi scrubber may be able to meet the standard by operating with a pressure drop between 18 and 24 inches, but may be designed to operate properly between 20 and 22 inches. If the O&M requirement is different from the standard, continue with step 3.

Step 3: Determine if it is necessary to establish a permit requirement to ensure that the O&M provision is met and compliance with highest and best can be demonstrated. If the production level would increase and the production costs would decrease when the control device or emission reduction process is operated or maintained at lower efficiency and effectiveness, an O&M requirement is appropriate. If operating at less than the highest efficiency and effectiveness would result in an increase in production costs, then an O&M requirement would not be necessary. In addition, an O&M requirement could be appropriate for a problem source.

O&M requirements may be appropriate for an air pollution control device or an emission reduction process. An emission reduction process is a method of operation that is relied upon in order to comply with an emission standard. Thus, O&M requirements may be applicable to an emissions unit even if an air pollution control device is not used to comply with a standard.

For example, an emission reduction process may be an operating parameter such as a temperature or pressure range within which an emissions unit is operated to minimize emissions. If, for example, this range raises operating costs or the source does not otherwise monitor the parameter, an O&M requirement is probably appropriate. An emission reduction process may also be a material recovery step such as a cyclone. In this case, an O&M requirement may not be appropriate since there is an economic incentive to operate the process at highest efficiency and effectiveness (although an O&M requirement could be appropriate for sources with poor compliance histories).

For pollution control devices and/or emission reduction processes, O&M requirements are related to thehighest reasonable efficiency and effectiveness to minimize emissions. The highest reasonable efficiencyand effectiveness is the level that can be routinely achieved by the equipment or process if operated and maintained properly. Normal performance variation should be considered in determining the emission level that can be routinely achieved. Normal variation in the emission reduction per unit of production should also be considered. For example, a boiler normally may be less efficient at lower steaming rates.

The highest reasonable efficiency and effectiveness should also take into consideration all pollutants controlled by the control device or emission reduction process, recognizing that minimizing emissions of one pollutant could increase emissions of another and/or increase risk from effluent or waste. In this case, O&M requirements should be specified consistent with other permit terms to optimize emission reduction and minimize overall risk, while ensuring that all emission standards are met.

Energy consumption and operational costs outside of the normal performance range of the equipment or process may be considered if significant. For example, an incinerator designed to achieve 95% reduction may be able to achieve 97% reduction with a disproportionate increase in energy consumption. In this case, it would not be appropriate to use the 97% efficiency as an O&M requirement.

If the efficiency and effectiveness of the equipment or process varies by operational mode (e.g. start-up,shut-down, normal operations, alternative operating scenario), the highest reasonable efficiency and effectiveness should be determined separately for each mode.

Please read the instructions for the EU500 and CP700 series of forms for a more specific discussion of Highest and Best relative to completing the Emission Unit and Monitoring Forms.

Changing ACDP conditions

It is possible through the Oregon Title V Operating Permit application to petition DEQ to change or remove conditions from the existing Air Contaminant Discharge Permit. This may be done through FormAR404, ACDP Condition Change Request. Complete that form according to the associated instructions and submit it with the application. Note that, until such time as DEQ approves a request to change or remove an ACDP condition, the owner/operator must continue to comply with the condition.

List of acronyms

105 Funds	Federal grant funds awarded annually to DEQ under section 105 of the CAA. Includesboth base and special projects grants.
ACDP	**Air Contaminant Discharge Permit**
API	**Air Pollution Index**
AQ	**Air Quality**
AQMA	**Air Quality Management Area** A term defined in the 1970 Clean Air Act. Used by DEQ to define nonattainment areasfor Portland, Medford/Ashland, and the Eugene-Springfield area.
BACM	**Best Available Control Measure** Best measure for controlling small or dispersed sources of particulate matter such asroadways, woodstoves and open burning.
BACT	**Best Available Control Technology** An emissions limit set in a permit that is based on the maximum degree of reduction foreach regulated pollutant. The determination is made on a case-by-case basis, prior to permit issuance, taking into account costs. BACT is at least as stringent as any applicable NSPS. BACT applies to proposed new major (>SER) stationary sources andmajor (>SER) modifications and is determined through New Source Review.
CAA	**Clean Air Act (Federal)**
CAAg	**Compliance Assurance Agreement** The part of the SEA that addresses minimum compliance assurance and enforcementrequirements.
CAAA90	**Clean Air Act Amendments of 1990**
CBD	**Central Business District** Boundaries used as the nonattainment area for CO in Grants Pass
CDS	**Compliance Data System** A data base maintained by Program Operations section which contains data on sourceinspections, permitting, and compliance activities.
CEM	**Continuous Emission Monitoring system** The equipment used to sample and condition (if applicable), to analyze, and to provide apermanent record of emissions. It is a type of Continuous Monitoring System (CMS).
CFR	**Code of Federal Regulations** A systematic printing of the rules published in the Federal Register. This publication isthe source of federal requirements for programs which are delegated to the states. These rules are often adopted by reference into the OARs.
CMS	**Continuous Monitoring System** The total equipment used to sample and condition (if necessary), to analyze, and toprovide a permanent record of emissions or process parameters.

CO	**Carbon Monoxide**
CO_2e	**Carbon Dioxide Equivalent**
CTG	**Control Technology Guidelines** A series of guidelines issued by EPA for specific industries in ozone nonattainment areas which define what controls are acceptable as RACT for those industries
DEQ	**Department of Environmental Quality**
DLCD	**Department of Land Conservation and Development** A state department responsible for adopting state-wide land use goals and polices. Italso coordinates planning efforts of other state agencies and departments (such as DEQ) as well as local governments to ensure that they are in compliance with state-wide goals and plans.
DOE	**Department of Ecology** Washington counterpart to the Oregon DEQ.
DOE	**Department of Energy (Oregon)**
DOGAMI	**Department of Geology and Mineral Industries** A lead state agency which regulates quarry and mine siting.
EI	**Emissions Inventory**
EIS	**Environmental Impact Statement**
EPA	**Environmental Protection Agency**
EQC	**Environmental Quality Commission** The Commission which oversees the activities of DEQ. Members of the Commission areappointed by the Governor.
FCAA	**Federal Clean Air Act**
FLM	**Federal Land Manager** The Secretary of the federal department with authority over a Class I area. The FederalLand Manager must be notified within 30 days of receipt of a permit application for a source that may impact the Class I area, and also within 30 days of any public hearingsor final actions regarding the application.
GACT	**Generally Achievable Control Technology** Alternative emission standard promulgated by EPA for non-major sources of hazardousair pollutants which provides for the use of control technology or management practiceswhich are generally available.
GHG	**Greenhouse Gas**
gr/dscf	**Grains/Dry Standard Cubic Foot** A common unit of measure of concentration used to measure particulate emissionsduring a stack test.

H & B	**Highest and Best** An emission control level required for all air pollution sources in the state. For sourcesthat fall under federal guidance, such as LAER, BACT, RACT, MACT, or NSPS, Highest and Best is generally considered the federal requirement. OAR 340-226-0100through 340-226-0140 on Highest and Best says that air contaminant emissions shall be controlled so as to maintain overall air quality at the highest possible level; it is interpreted as the best control needed for a particular situation. A TACT emission limitmay be established on a case-by-case basis to facilitate compliance with the Highest and Best rule.
HAP	**Hazardous Air Pollutant**
HB2175	**House Bill 2175** The 1991 State law requiring that three classes of polluters pay their share in supportingDEQ in its efforts to control and improve air quality. These three polluting categories arewood stoves, automobiles, and industries.
HW	**Hazardous Waste**
LAER	**Lowest Achievable Emission Rate** An emission limit set in permit conditions that is required by New Source Review rules for major (>SER) new sources and modifications in nonattainment areas. The LAER determination must be made in the preconstruction application after a nationwide review of the source category. LAER is the most stringent emission limitation achieved in practice by any source within that same class of source. The LAER requirement doesnot consider economic factors. LAER cannot be less stringent than any applicable New Source Performance Standard (NSPS).
LCDC	**Land Conservation & Development Commission**
LRAPA	**Lane Regional Air Pollution Authority** A Regional authority for Lane County, Oregon. It receives full delegation from DEQ.
LUBA	**Land Use Board of Appeals**
LUCS	**Land Use Compatibility Statement** This document must clearly show local approval of the project. An essential componentof an air pollution permit application.
MACT	**Maximum Achievable Control Technology** Emission limit, to be established by EPA for specific industries, based on the best demonstrated control technology or practice in similar sources. To be applied to majorsources emitting listed toxic pollutants.
METRO	**Metropolitan Service District (Portland)** A regional government covering portions of Multnomah, Washington, and ClackamasCounties. They are responsible for solid waste planning, transportation planning, andthe zoo.
NAAQS	**National Ambient Air Quality Standards** Federal standards for the minimum ambient air quality needed to protect public health and welfare. They have been set for: SO2, PM_{10}, $PM_{2.5}$, NO_x, CO, O3 (VOC), and Pb.

NESHAPS	**National Emission Standard for Hazardous Air Pollutants** A federal program delegated to the states for the control of hazardous air pollutants,including asbestos. The Oregon rules can be found in OAR 340-244-0220 and OAR340, Division 248.
NO_x	**Oxides of nitrogen** A mixture of NO, NO2, and NO3.
NSPS	**New Source Performance Standards** A federal emission standard prescribed for certain criteria pollutants from certain new oraltered stationary source categories under Section 111 of the CAA. This program is delegated to DEQ; the Oregon rules can be found in OAR 340, Division 238.
NSR	**New Source Review** The federal program for review of new major sources and major modifications. InOregon, this is defined in OAR 340, Division 224.
O_3	**Ozone** A form of photochemical oxidant.
OAR	**Oregon Administrative Rules** The working rules for DEQ, approved by the Environmental Quality Commission
ORS	**Oregon Revised Statutes** Legislative statutes that give DEQ the authority to pass the more detailed OAR rules.
Pb	**Lead** The chemical symbol for the element lead.
PM_{10}	**Particulate Matter** less than 10 microns in diameter
$PM_{2.5}$	**Particulate Matter** less than 2.5 microns in diameter
PO	**Program Operations** A section of the Air Quality Division of DEQ which issues federal operating permits forindustrial and commercial sources, coordinates air program implementation with regional offices, and tracks point source compliance.
PSAPCA	**Puget Sound Air Pollution Control Authority** A regional air pollution authority within the state of Washington with offices in Seattle.
PSD	**Prevention of Significant Deterioration** A federal permitting program, delegated to DEQ, designed to ensure that air quality does not degrade beyond the NAAQS levels or beyond specified incremental amountsabove a prescribed baseline level. PSD requires application of BACT to major stationary sources and major modifications for regulated pollutants and considerationof soils, vegetation and visibility impacts in the permitting process.
PSD Increment	**Prevention of Significant Deterioration Increment** In areas where air quality is better than the ambient standards, emissions from a newsource or modification standards, emissions from a new source or modification are limited such that increases in pollutant concentration over the baseline concentrationshall not exceed those increments shown in Table 1 of OAR 340-202-0210.

PSEL	**Plant Site Emission Limit** The State limit on mass emissions of each pollutant from the entire source, and frequently also includes limits for portions of a facility. The PSEL program provides a basis for defining major modifications for NSR purposes, allows emission "bubbles" tobe established, and allows DEQ to control air quality degradation in all areas of the State. PSELs are set in each permit based on baseline of 1977 or 1978.
RACM	**Reasonably Available Control Measure** A broadly defined term for technologies and other measures that control pollution (including RACT). In the case of PM-10, it refers to measures for controlling small ordispersed sources such as dust, woodsmoke, and open burning.
RACT	**Reasonably Available Control Technology** An emission limit on existing sources in nonattainment areas, usually defined by EPA ina Control Technology Guideline (CTG) and adopted and implemented by States. Currently applies to VOC sources in the Portland area and will be a contingency planrequirement for PM10 nonattainment areas.
RCRA	**Resources Conservation & Recovery Act** A hazardous waste regulation
SAC	**State Agency Coordinating Program** A program that tries to insure that rules passed by various state agencies are not in conflict with one another. It is required by ORS 197.180, and was approved by the EQCon 8/10/90.
SATS	**Salem Area Transportation Study** A study boundary used as the nonattainment area for CO and ozone around Salem.
SKATS	**Salem/Keizer Area Transportation Study** The current transportation study boundary for the Salem area. The CO and ozone nonattainment areas were not changed to this boundary because it excludes someareas which were part of the original SATS study area
SEA	**State-EPA Agreement** Annual agreement between DEQ and EPA that specifies work to be performed by DEQduring the fiscal year.
SIP	**State Implementation Plan** State plans, including OARs, identifying actions to implement the states' responsibilitiesunder the Clean Air Act. Specific SIPs are required for each nonattainment area, as well as for all attainment areas of the State.
SO_2	**Sulfur Dioxide**
STP	**Sewage Treatment Plant**
SW	**Solid Waste**
SWAPCA	**Southwest Washington Air Pollution Control Authority** A regional air pollution authority within the state of Washington with offices in Vancouver.

TACT	**Typically Achievable Control Technology** Emission limit established on a case-by-case basis for a criteria pollutant from a particular emissions unit in accordance with OAR 340-226-0130 (Highest and Best).
Title III	**Title III of the Clean Air Act Amendments of 1990 (CAAA90)** Addresses air toxics.
Title V	**Title V of the CAAA90** Addresses the permit program.
TS	**Technical Services** A section of AQ which provides industrial program support in the areas of sourcetesting, modeling, emissions monitoring, emission inventory, ambient air quality monitoring, and backyard burning.
TSP	**Total Suspended Particulates**
UGB	**Urban Growth Boundary** Boundaries in the Comprehensive Land Use Plans developed by cities and counties inOregon. Used as boundaries for Medford, Grants Pass, Klamath Falls, La Grande, Eugene/Springfield, and Oakridge nonattainment areas.
UTM	**Universal Transverse Mercator** A grid system used on United States Geological Service (USGS) maps.
VOC	**Volatile Organic Compounds** A group of carbon containing compounds that volatilize at ambient temperatures andreact in the atmosphere with nitrogen oxides in presence of heat and sunlight to formozone. Examples of VOCs are gasoline fumes and solvents in paints.