

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

NOC FORM 25 ETHYLENE OXIDE STERILIZER

GENERAL INFORMATION		
Facility Name:	Contact Person: Phone Number: Email:	
Facility Operating Schedule: ____ hrs/day, ____ days/wk, ____ wks/yr Check days when operating: M T W Th F Sat Sun	Sterilizer Operating Schedule: ____ hrs/day, ____ days/wk, ____ wks/yr Check days when operating: M T W Th F Sat Sun	
____ new unit ____ modification ____ # identical units	Manufacturer:	Model & Serial #:
TECHNICAL SPECIFICATIONS		
Chamber Dimensions: Length (ft): Width (ft): Height (ft):	Temperature (°F) Pressure (psi) Annual Sterilant Usage (lbs) EtO Content of Sterilant (%)	
STERILIZER OPERATIONS: Please complete the following descriptions. <u>Add additional pages as needed.</u>		
Describe sterilizer use. Include: description of sterilization cycle, cycle duration, amount of sterilant used per load, and types of items sterilized.	Describe ventilation system. Include exhaust blower capacity, height of exhaust stack or vents, diameter or cross sectional area of exhaust stack, exhaust gas temperature, and distance to fence line.	Describe Control Equipment. Include equipment type, make and model, and predicted EtO destruction efficiency.
OTHER INFORMATION		
The following information is needed to complete the application: <ol style="list-style-type: none"> 1. <u>Manufacturer brochure or technical fact sheet for sterilizer.</u> 2. <u>Manufacturer brochure for control device (if used).</u> 3. <u>A facility map or maps showing locations and elevations of exhaust vents and stacks, air intakes for ventilation, peak building heights, and property boundaries.</u> 		

REQUIREMENTS FOR ETHYLENE OXIDE STERILIZERS
ORCAA 3/22/06

1. **Ambient Impact Compliance:** Ethylene Oxide (EtO) is identified in WAC 173-460-150 as a Class A Toxic Air Pollutant in Washington State. Due to the serious health effects associated with exposure, no de minimis level has been established for EtO. A facility with an EtO sterilizer installed or modified on or after June 18, 1991 that releases EtO into the atmosphere must demonstrate ambient impact compliance in one of the following ways:
 - a. Use Toxic Best Available Control Technology (T-BACT) and release less than 10 lbs of EtO per rolling 12-month period (WAC 173-460-080(2)(e))

or
 - b. Perform ORCAA approved dispersion modeling to show that the maximum annual-average concentration of EtO is less than 0.010 $\mu\text{g}/\text{m}^3$ (WAC 173-460-080(2)(a) & 173-460-150 Table 2)

or
 - c. Perform an ORCAA approved human health risk assessment to show that the maximum increased cancer risk caused by the facility's EtO emissions is less than one in one hundred thousand (WAC 173-460-090(2))

or
 - d. Show that although a, b, and c cannot be met, emissions are controlled to the greatest extent possible and the project will result in a net benefit to the environment. (WAC 173-460-100(3))
2. **Detriment to Persons and/or Property:** ORCAA Regulations Rule 7.6 prohibits the emissions of any air contaminants that cause detriment to the health, safety, or welfare of any person. Therefore, a facility with an EtO sterilizer installed before June 18, 1991, and not modified since then, must demonstrate that it does not cause detriment to any person's health, safety, or welfare. This can be done by either voluntarily submitting the information and demonstrations described in requirement 1 (above) or by demonstrating to ORCAA that there are no detriments using an alternative approach.
3. **WISHA Compliance:** A facility that uses EtO is required to comply with the Washington Industrial Safety and Health Act (WISHA). Regulations related to worker exposure to EtO can be found in Chapter 296-855 WAC. Applicants can contact Department of Labor and Industries offices in Tumwater, Aberdeen, Port Angeles, or other locations in the state to determine their compliance status.
4. **Reporting and Record Keeping:** A facility that operates an EtO sterilizer shall be required to monitor and record EtO usage, emissions, excess emissions, and certain operating parameters determined by ORCAA. The facility shall be required to deliver such records to ORCAA upon request, to report emissions annually, and to report excess emissions as they occur.
5. **Operation and Maintenance:** A facility that operates an EtO sterilizer shall be required to develop an operation and maintenance plan that includes: proper operator safety training, leak checks, and contingency plans in case of malfunction.
6. **Other:** Additional requirements shall be determined by ORCAA on a case-by-case basis.