



EtO Emission Control System Test Report

Test Report #: 

Prepared for:

V.A. Medical Center
6010 West Amarillo Boulevard
Amarillo, TX 79106

Location of Test:

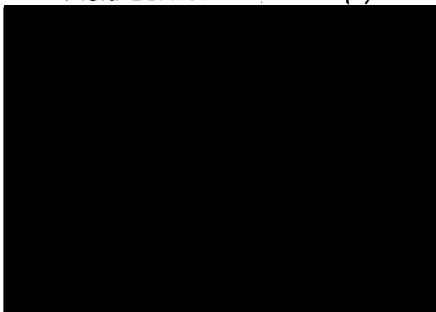
SPD

Attention:

Date(s) Tested:

March 28, 2013

Field Service Technician(s):



Executive Summary

This report details the findings of [REDACTED] Ethylene Oxide Emissions Testing performed on March 28, 2013 at V.A. Medical Center located in Amarillo, TX 79106. Specifically, EtO emission control efficiency was determined on the EtO Catalytic Control Device at this facility. ENV's testing on this EtO Emission Control Device indicated the following:

- EtO emissions control efficiency was below the manufacturer's specification of 99.9% for the EtO Catalytic Control Device. Specifically, an EtO emissions control efficiency of 99.6% was obtained.

[REDACTED] that your local service representative be contacted to arrange service for repairs/replacement of parts to return unit to manufacturer's specifications. [REDACTED] also recommends retesting the emissions control efficiency of this unit after service has been performed in order to insure optimum system performance and minimize pollutant emissions.

Testing Methods and Procedures

[REDACTED] conducted its testing using a procedure based on US EPA Method 18M for Sample Collection and Analysis of Ethylene Oxide (EtO) by Gas Chromatography and Flame Ionization Detector. Specifically, inlet (upstream) and outlet (downstream) air samples were collected from the EtO Emission Control System through the use of a electrically powered air sampling pump connected to two inert impermeable bags. Teflon sampling lines were connected from the air pump to the upstream and downstream sampling ports of the system, and from the air pump to the collecting bags. The sampling lines were activated during the period after sterilizer evacuation when the peak levels of EtO reach the control device. Upstream and downstream samples were collected over a 15 minute sampling period with a sampling rate of 1.0 LPM to obtain a proper bag fill. The upstream and downstream EtO concentrations were determined by an American Industrial Hygiene Association accredited laboratory. By comparing the EtO concentration in the two samples, the EtO control efficiency of the system was calculated.

[REDACTED]		Project: V.A. Medical Center	
Service Specialists for Calibration, Certification and Decontamination		Amarillo, TX 79106	
(210) 690-3368		Test Date(s):	
[REDACTED]		March 28, 2013	
Technician(s):	Prepared by:	Test Report #:	[REDACTED]

Air Testing Data and Calculations Table

V.A. Medical Center
Amarillo, TX 79106

SPD
March 28, 2013

Sterilizer Summary

Manufacturer: Donaldson
Size (cubic feet or feet): 50

Number of cycles per year: 170

EtO Emission Control Device

Manufacturer: Donaldson
Model: ETX00-6550
Serial #: IG340866
EtO Disposer Airflow: 126 CFM Measured at Exhaust Stack

Method of Sampling: 22 Liter inert impermeable gas sampling bag (Cali-5-Bond) in conjunction with electric air compression pump operating at 1.0 Liters per Minute (LPM).

Method of Analysis: Gas Chromatography/FID.

Reporting Limit: 0.5

Analytical Lab: Integrated Analytical Laboratories (Randolph, NJ) - AIHA# 257

Bag#	Upstream or Downstream	Start Time	Stop Time	Sample Duration (Minutes)	EtO Results (PPM)
1U	Upstream	11:30 AM	11:45 AM	15	1012
2D	Downstream	11:30 AM	11:45 AM	15	3.98

$$\text{EtO Removal Efficiency} = 100\% \times \frac{(\text{Upstream Bag EtO Concentration} - \text{Downstream Bag EtO Concentration})}{\text{Upstream Bag Concentration}}$$

$$99.6\% = 100\% \times \frac{(1012 - 3.98)}{1012}$$

Manufacturer's Specification = 99.9%

Comments:

[Redacted]		Project: V.A. Medical Center Amarillo, TX 79106	
Service Specialists for Calibration, Certification and Decontamination		(210) 690-3368	
[Redacted]		Test Date(s): March 28, 2013	
Technician(s):	Prepared by:	[Redacted]	Test Report #: [Redacted]

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