TABLE OF CONTENTS

[1.0 PURPOSE 1](#_Toc402854523)

[2.0 SCOPE 1](#_Toc402854524)

[3.0 reference documents 1](#_Toc402854527)

[3.1 TI Standard Policy and Procedure (SP&P) 04-04-01: "Environmental, Health and Safety” 1](#_Toc402854528)

[3.2 TI ESH Standard 03.01D “Chemical Exposure Assessment” 1](#_Toc402854529)

[3.3 TI ESH Standard 03.01D Appendix A: TI Occupational Exposure Limits 1](#_Toc402854530)

[4.0 Definitions 1](#_Toc402854531)

[5.0 Requirements 2](#_Toc402854532)

[5.1 Exhaust Stack Inventory 1](#_Toc402854533)

[5.2 Exhaust Stack Assessments 2](#_Toc402854534)

5.3 Abatement Systems 2

[6.0 STANDARD Approval 2](#_Toc402854535)

[7.0 Revision history 3](#_Toc402854536)

# PURPOSE

This standard establishes the minimum requirements for air emissions management.

# SCOPE

This standard applies to wafer fab and A/T sites.

# reference documents

## TI Standard Policy and Procedure (SP&P) 04-04-01: "Environmental, Health and Safety”

## TI ESH Standard 03.01D “Chemical Exposure Assessment”

## TI ESH Standard 03.01D Appendix A: TI Occupational Exposure Limits

# Definitions

[TI ESH Standards Glossary of Definitions](https://sps01.itg.ti.com/sites/wwf/esh/standards/Knowledge_Bank/00.01.xlsx) –the following words in **bold type** contained in this standard will be added to the TI ESH Standards Glossary of Definitions.

**Exhaust stack -** any stationary or fixed duct, flue, chimney, or other vent which discharges air containing **hazardous materials** to the atmosphere.

**Hazardous materials** – materials emitted from an exhaust stack that are regulated by an air emissions control authority, air emissions permit, or similar local government regulatory control, or are listed in TI ESH Standard 03.01D Appendix A: TI Occupational Exposure Limits (OEL).

# Requirements

Sites shall have a program to manage air pollution which complies with all local regulatory and air emissions permitting requirements.

## **Exhaust Stack Inventory**

### Sites shall maintain the following information for each **exhaust stack** that contains **hazardous materials**:

#### The location of the **exhaust stack**

#### Type or category of exhaust (for example: acid, caustic, volatile organic compounds (VOC), general, etc.)

#### List of **hazardous materials** emitted from the **exhaust stack**

## **Exhaust Stack Assessments**

#### The site shall perform assessments for each **exhaust stack** described by 5.1 to determine if there is a potential for personnel exposure outdoors on the plant site above a TI Occupational Exposure Limit (OEL).

Note: This refers to any specific outdoor location (outside of enclosed buildings and structures) on the plant site where personnel could be exposed to a **hazardous material** above a TI OEL from an exhaust stack emission. Possible examples are: work on rooftops or other elevated surfaces near exhaust stacks; exhaust stacks that point downward toward walkways or similar areas where personnel may be present, etc. The chemical exposure assessment process is governed by TI ESH Standard 03.01D “Chemical Exposure Assessment”.

#### Exceptions: The following exhaust stacks are not subject to sections 5.2 – 5.3:

#### Stacks emitting only heat, or

#### Stacks with total emissions of **hazardous materials** less than or equal to 0.04 lb/hr or 0.02 kg/hr; or

#### Stacks or vents for office areas, restrooms, or food preparation areas, or

#### Stacks removing only room air to meet air changeover requirements.

## **Abatement Systems or Controls**

#### Sites shall implement controls and/or abatement as defined by local regulatory and air emissions permitting requirements.

#### Sites shall implement controls and/or abatement where a personnel exposure above a TI OEL may exist if identified per section 5.2.1.

Note: Controls may include operational procedures or restrictions and/or equipment, exhaust stack or infrastructure changes or adjustments. Abatement may include equipment or processes to remove hazardous materials from an exhaust stream such as point-of-use (POU) abatement equipment, filtration systems, adsorption systems, water scrubbers, thermal treatment methods, etc.

#### Installed abatement systems will be operated and maintained in accordance with all local regulatory and air emissions permitting requirements and as follows:

#### Abatement systems will be operated as designed to control emissions per the manufacturer’s instructions.

#### The site will maintain and follow a periodic inspection and maintenance schedule.

#### The site will maintain written work instructions describing the operation of the system.

# STANDARD Approval

This standard has been approved by David Thomas, TI Vice President.

# Revision history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rev#** | **Date** | **Nature of Revision** | **Author/Editor** | **Approver** |
| NEW | 01/01/1996 | New |  |  |
| A | 09/24/2003 | Major revision, periodic review | J.P. Suplita |  |
| B | 04/30/2005 | Minor revision to incorporate Appendix A | Tina Gilliland |  |
| C | 12/22/2006 | Periodic review with minor editorial changes | Tina Gilliland |  |
| D | 10/07/2015 | Updated format. Deleted requirement for written programs. Clarified Scope. Modified emissions inventory and exhaust stack requirements including known exception conditions. Removed engineering design criteria. Updated/removed definitions. Added explanatory Notes to sections 5.2 and 5.3. | John Willis | ELC |
|  |  |  |  |  |