

# TSI Link™ Report Creator - Inhalation Exposure Area Reports



Worksheet Guide (US)

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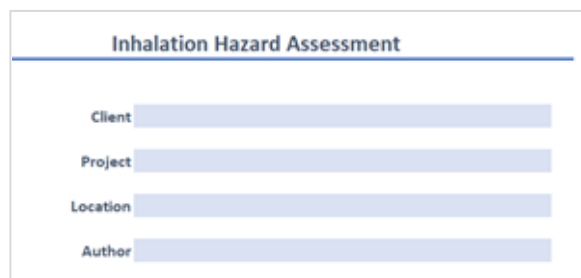
## Overview

The Inhalation Exposure workbook helps health and safety professionals to assess inhalation hazards. The worksheet templates in this workbook are designed to make your exposure analysis efficient, accurate and easy to understand and include the assessment of Ceiling, STEL, and TWA exposure limits. Moreover, they provide rich data visualizations that help you explain your findings and recommendations to clients, workers and managers.

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## Area Reports

Area reports paint a spatial picture of measured contaminant levels within an area. An industrial hygienist will often perform a walkthrough of the facility as part of their initial assessment, measuring contaminant levels along the way and filling in an area report. Area reports are also useful to identify contaminant sources and hotspots, helping identify leaks and failures of engineering controls. They are helpful in educating the workforce on hazards, identifying the necessity of wearing PPE.



The image shows a screenshot of a form titled "Inhalation Hazard Assessment". The form has a header with the title and a blue horizontal line. Below the header, there are four input fields, each with a label to its left: "Client", "Project", "Location", and "Author". Each field is represented by a light blue rectangular box.

There are two area report template worksheets in this workbook.

- **Area – Particulate/Gas** supports a wide range of measurements. PM measurements allow for correction factors of both aerosol type and instrument response.
- **Area – VOC** is appropriate for PID-based measurements, allowing for a mixture of compounds with differing response factors.

If you are new to Report Creator, check out the [Report Creator Product Page](#) for guides and videos including: setting up an account, installing the application, using the study manager, using the layout view, customizing report creator templates, etc. This application guide builds upon and supplements those guides. This guide does not duplicate all of the content on those guides.

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## Inhalation Exposure Worksheets

The table below lists the worksheets available in the Inhalation Exposure workbook.

Worksheet Template	Supported Measurements*	Supported Instruments	Examples of Applications
<b>Area – Particulate/Gas</b>	Over 25 different gases or particulate measures	OmniTrak™ Solution Q-Trak™ XP Monitor DustTrak™ II Monitor DustTrak™ DRX Monitor	Creating a dust exposure level map of the facility
<b>Area - VOC</b>	VOC (ppb) VOC (ppm)	OmniTrak™ Solution Q-Trak™ XP Monitor	Charting the exposure limits for the constituent parts of a volatile organ compound (VOC) mixture around an area

\*Note that correction factors can be applied to many measurement types, including PM, CO, SO<sub>2</sub>, Formaldehyde, CO<sub>2</sub>, and particle number concentrations

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## Worksheet Steps

### Step 1 Select a Worksheet

The Inhalation Exposure workbook is one of many that are available. An overview of the workbooks available is on the Report Creator product page.

There many different worksheets within this Inhalation Exposure workbook. This guide covers the Area – Particulate Worksheet and the Area – VOC worksheet. Guides for the other Inhalation Exposure worksheets can be found in the RESOURCES section of the [Report Creator Product page](#).

## Step 2 Cover Sheet

This workbook contains a very simple Cover sheet that can be customized to suit your needs. For example, by adding your logo, customizing the font, or adding other information. See the *Customizing Report Creator Templates* to learn how. Other sheets can be added to your workbook, if desired.

## Step 3 Study Context: Demographic Information, Locations, Parameters

After you have created a blank worksheet.

- Select the Parameter you want to study.
- Enter the Context / Demographic information to provide context for your report.
- Adjust the Control Limits as desired.
- Adjust the Correction Factors for your situation.
- Enter the locations names column A in the Test Results table.
- Enter the target limits into the worksheet templates as desired.

Area - Particulate/Gas							ID:
Selected Parameter	PM 2.5 (mg/m3)					Date:	
Task/Activity/Location							
Control Limits	STEL Period	15.00	minutes	Gravimetric Concentration (mg)		1.00	Correction Factors
	TWA Period	8.00	hours	Photometric Concentration (mg)		1.00	
	Ceiling Period	5.00	minutes	Existing Cal Factor		1.00	
			Correction Factor		1.00		
Comments:							
Data Summary - PM 2.5 (mg/m3)							
Target Names							
Target Limits							
Location	Duration (hr)	Logging Interval (s)	PM 2.5 (mg/m3) Min	PM 2.5 (mg/m3) Max	PM 2.5 (mg/m3) Avg	(mg/m3) TWA	(mg/m3) Ceiling
Location 1	0.	0.	0.000	0.000			0.000
Location 2	0.	0.	0.000	0.000			0.000
Location 3	0.	0.	0.000	0.000			0.000
Location 4	0.	0.	0.000	0.000			0.000

## Step 4 Load Study Data

Load up to ten studies using STUDY MANAGER or File Import. *For background see the [Study Manager Guide](#).*

Make sure the study names match the labels you added above. Swap them if necessary. When ready, click **Add Data** to import data into the worksheet.

Import up to ten TESTS using TEST MANAGER or File Import. *Make sure the test names match the labels if you have added them. Swap them if necessary. When ready, click **Add Data** to import data into the worksheet.*

# Step 5 Analyze Data

## Test Results Summary

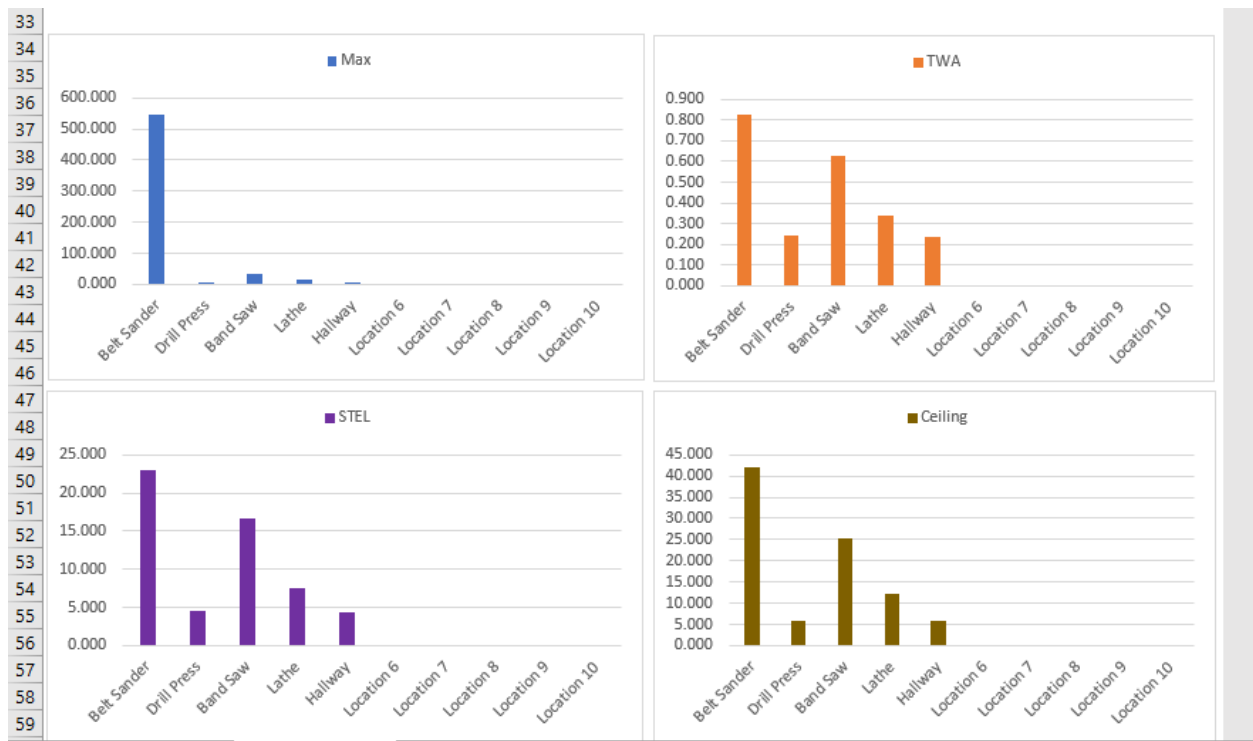
Once the data files are loaded, the statistical data summary is automatically created as shown below. All data reflects the correction factor applied in the header.

Any values that exceed the target limits are displayed in red. Column charts for each statistic are also displayed to help with comparative analysis.

17 Data Summary - PM 2.5 (ug/m3)									
19 Target Names									NIOSH Silica
20 Target Limits									15
21 Location	Duration (hr)	Logging Interval (s)	Min	Max	Avg	TWA	Ceiling	STEL	
22 Belt Sander	1.02	1.	0.000	544.000	6.484	0.829	42.170	22.953	
23 Drill Press	1.02	1.	0.000	7.000	1.906	0.244	5.953	4.473	
24 Band Saw	1.02	1.	0.000	33.000	4.888	0.625	25.113	16.590	
25 Lathe	1.02	1.	0.000	16.000	2.666	0.341	12.340	7.578	
26 Hallway	1.02	1.	0.000	6.000	1.855	0.237	5.727	4.413	

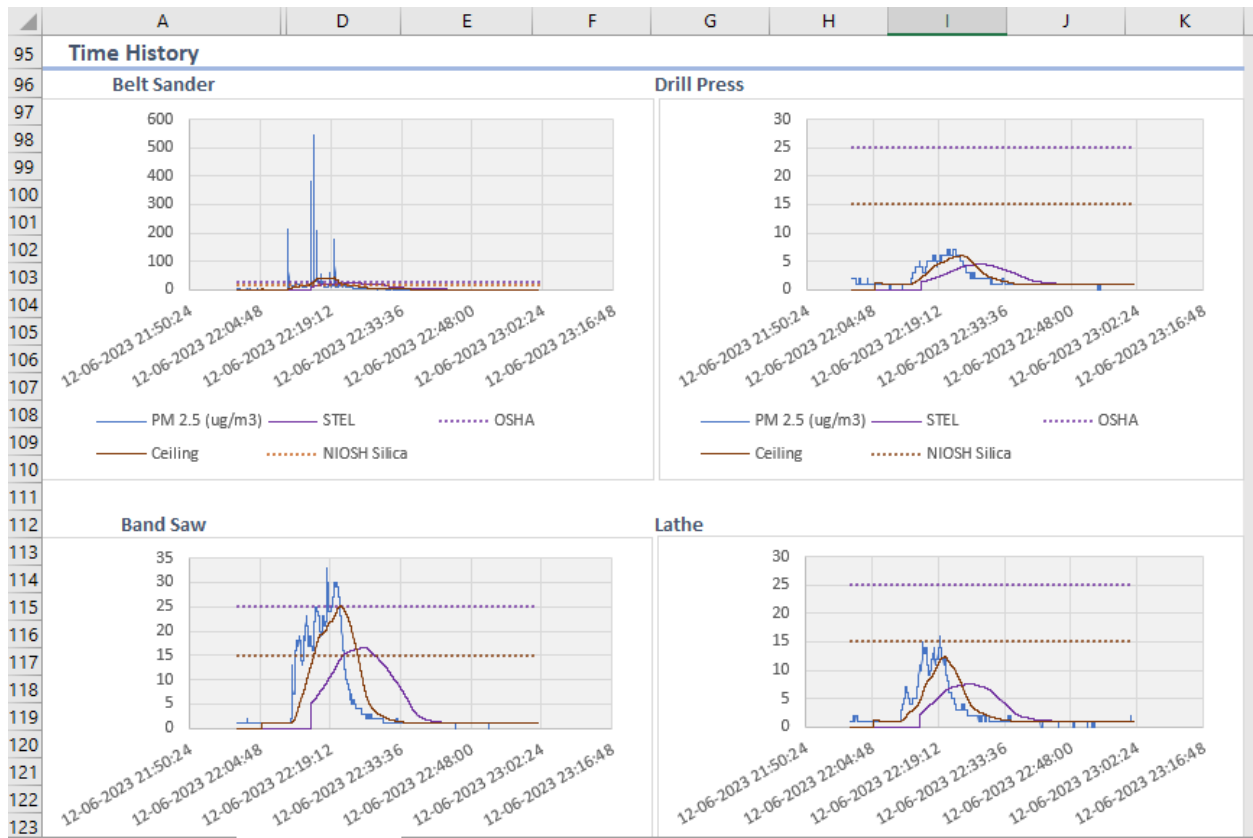
## Location Charts

Column charts for each statistic are also displayed to help with comparative analysis.



## Time Charts

Time charts are displayed for each location, along with the target limits. Both the real-time values and the STEL values are depicted, with any Ceiling or STEL target limits you have entered.



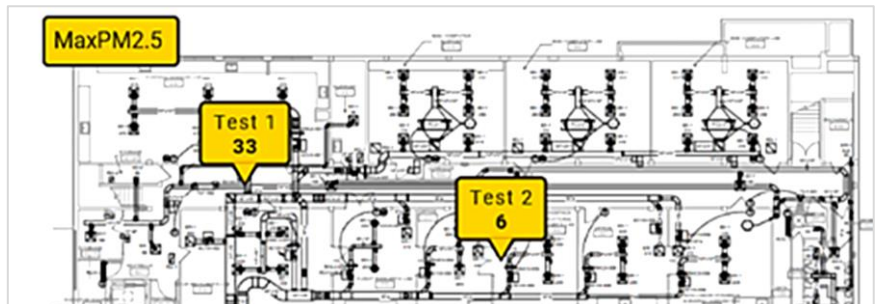
## Annotations Tools

You may wish to add additional context to the chart. This worksheet template contains a set of useful annotations outside of the printable range of the report, on the right side of the charts. These annotations can be simply dragged into the report. You can type information into the text boxes and position the line markers where you like.



## Layout View Analysis

The Layout View provides the ability to compare both studies spatially. In the example below, the Maximum PM2.5 measurements are displayed on a building floorplan. A photo, diagram, map, or any image can be used as the background. Check out the [Layout View guide for more information.](#)



## Step 6 Complete the Assessment

To complete the report, you can add recommendations under the Conclusions section.

The print layout for this sheet does not include the measurement data in the blue tables at the bottom of the sheet. They will not appear in a PDF export either.

Enter the compounds and concentration ratios for the gas mixture. If the mixtures are unknown, you may need to obtain an air sample and send it to an Industrial Hygiene laboratory for analysis.



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