



**IPS**  
Industrial Performance Services

**ITCS**  
Industrial Tubular Catalyst Services

# PROCESS SAFETY MANAGEMENT (PSM) PROCEDURE

# Process Safety Management (PSM) Procedure

January 2023

## A. Purpose

1. This section contains requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. These releases may result in toxic, fire, or explosion hazards.

## B. Application

1. This section applies to the following:
  - a. A process which involves a chemical at or above the specified threshold quantities listed in this section.
  - b. A process which involves a flammable liquid or gas (as defined in 1910.1200(c) of this part) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more except for:
  - c. Hydrocarbon fuels used solely for workplace consumption as a fuel (e.g., propane used for comfort heating, gasoline for vehicle refuelling), if such fuels are not a part of a process containing another highly hazardous chemical covered by this standard.
  - d. Flammable liquids stored in atmospheric tanks or transferred which are kept below their normal boiling point without benefit of chilling or refrigeration.
2. This section does not apply to:
  - a. Retail facilities.
  - b. Oil or gas well drilling or servicing operations; or,
  - c. Normally unoccupied remote facilities

## C. Definitions

1. "Atmospheric tank" means a storage tank which has been designed to operate at pressures from atmospheric through 0.5 psig. (Pounds per square inch gauge, 3.45 Kpa).
2. "Boiling point" means the boiling point of a liquid at a pressure of 14.7 pounds per square inch absolute (psia.) (760 mm.). For the purposes of this section, where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, the 10 percent point of a distillation performed in accordance with the Standard Method of Test for Distillation of Petroleum Products, ASTM D-86-62, which is incorporated by reference as specified in Sec. 1910.6, may be used as the boiling point of the liquid.
3. "Catastrophic release" means a major uncontrolled emission, fire, or explosion, involving one or more highly hazardous chemicals, that presents danger to employees in the workplace.
4. "Facility" means the buildings, containers or equipment which contain a process.
5. "Highly hazardous chemical" means a substance possessing toxic, reactive, flammable, or explosive properties and specified by paragraph (a)(1) of this section.

6. "Hot work" means work involving electric or gas welding, cutting, brazing, or similar flame or spark-producing operations.
7. "Normally unoccupied remote facility" means a facility which is operated, maintained, or serviced by employees who visit the facility only periodically to check its operation and to perform necessary operating or maintenance tasks. No employees are permanently stationed at the facility. Facilities meeting this definition are not contiguous with, and must be geographically remote from all other buildings, processes, or persons.
8. "Process" means any activity involving a highly hazardous chemical including any use, storage, manufacturing, handling, or the on-site movement of such chemicals, or combination of these activities. For purposes of this definition, any group of vessels which are interconnected and separate vessels which are located such that a highly hazardous chemical could be involved in a potential release shall be considered a single process.
9. "Replacement in kind" means a replacement which satisfies the design specification.
10. "Trade secret" means any confidential formula, pattern, process, device, information, or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix D contained in 1910.1200 sets out the criteria to be used in evaluating trade secrets.

#### **D. Employee Participation**

1. IPS★ITCS and the owning company shall develop a written plan of action regarding the implementation of the employee participation for each individual facility.
2. IPS★ITCS shall consult with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in this standard.
3. IPS★ITCS shall provide to employees' access to process hazard analyses and to all other information required to be developed under this standard.

#### **E. Process Safety Information**

1. IPS★ITCS shall complete a compilation of written process safety information before conducting any process hazard analysis required by the standard. The compilation of written process safety information is to enable IPS★ITCS, and the employees involved in operating the process to identify and understand the hazards posed by those processes involving highly hazardous chemicals. This process safety information shall include information pertaining to the hazards of the highly hazardous chemicals used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process.

## F. Information Pertaining to The Hazards of The Highly Hazardous Chemicals in The Process

1. This information shall consist of at least the following:
  - a. Toxicity information
  - b. Permissible exposure limits
  - c. Physical data
  - d. Reactivity data
  - e. Corrosivity data
  - f. Thermal and chemical stability data
  - g. Hazardous effects of inadvertent mixing of different materials that could foreseeably occur

**Note:** SAFETY DATA SHEETS meeting the requirements of 29 CFR 1910.1200(g) may be used to comply with this requirement to the extent they contain the information required by this subparagraph.

- h. Ensure IPS★ITCS receives and retains copies of SDS Sheets on the chemicals and processes affected by this standard.

## G. Responsibilities

1. IPS★ITCS shall assure that each IPS★ITCS employee is trained in the work practices necessary to safely perform their job.
2. IPS★ITCS shall assure that each IPS★ITCS employee is instructed in the known potential fire, explosion, or toxic release hazards related to their job and the process, and the applicable provisions of the emergency action plan.
3. IPS★ITCS shall document that each IPS★ITCS employee has received and understood the training required by this paragraph. IPS★ITCS shall prepare a record which contains the identity of the IPS★ITCS employee, the date of training, and the means used to verify that the employee understood the training.
4. IPS★ITCS shall assure that each IPS★ITCS employee follows the safety rules of the facility including the safe work practices required by paragraph (f)(4) of this section.
5. IPS★ITCS shall advise the owning company of any unique hazards presented by IPS★ITCS' work, or of any hazards found by the IPS★ITCS employee's work.
6. IPS★ITCS employees shall not perform hot work until a hot work permit is obtained from employer. The permit shall document that provisions of CFR 1910.252(a) have been met.
7. Employees must immediately report all accidents, injuries and near misses. An incident investigation must be initiated within 48-hours. Resolutions and corrective actions must be documented and maintained 5-years.
8. All IPS★ITCS employees must respect the confidentiality of trade secret information when the process safety information is released to them.

# Revision History

Rev	Rev Date	Rev By	Approved By	Description
1.0	1.3.2022	Shayne Torrans	Shayne Torrans	Initial Procedure Document
1.1	12.20.2022	Shayne Torrans	Shayne Torrans	Format Revision

**Approvals:**

Procedure Owner

\_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_  
Signature

# Competency Assessment

No.	Questionnaire	C/NYC
Q1		
A1		
Q2		
A2		
Q3		
A3		
Q4		
A4		
Q5		
A5		

Enclosed Attachments	
Risk Assessment	<input checked="" type="checkbox"/>
Environmental Aspect and Impact	<input checked="" type="checkbox"/>
Training and Competency	<input checked="" type="checkbox"/>
Measure and Evaluation Tools	<input checked="" type="checkbox"/>

# Competency Checklist

To be filled out by Trainer and signed by Employee, Assessor and Supervisor before being returned to the HSEQT Manager for recording purposes.

Procedure	Competency	Date	Competent YES / NO	Employee Signature

(Please tick appropriate box)

This employee is competent in performing the job.


This employee has not attained the competency level.

\*

\* *If the employee has not attained all competency levels, the General Manager must assess the action to be taken, provide an extension of training or alternative action as listed below.*

Alternate action to be taken: \_\_\_\_\_

Signed By	Employee:	_____	Date:	_____
	Trainer:	_____	Date:	_____
	Assessor:	_____	Date:	_____
	Regional Manager:	_____	Date:	_____



# Environmental Aspects and Impacts

## Identified Environmental Aspects and Impacts

The following table is a summary of the likely environmental aspects and impacts that may be identified during site inspections. The significance of each impact needs to be assessed using the Risk Assessment Model.

Activity	Aspect	Impact
<b>Purchasing &amp; Administrative Work</b>	Consumption of goods	Conservation of natural resources
	Consumption of energy (eg. Electrical equipment and facilities)	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of waste (eg. Paper)	Consumption of space for waste disposal; Habitat loss
<b>Climate Control</b>	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of noise	Disturbance to community; Habitat loss
<b>Cleaning of – offices / vehicles</b>	Storage, use and release of chemicals	Contamination of air, water or soil; Risk to human health
<b>Transport (Fleet vehicles / staff travel)</b>	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Loss of habitat at all stages of generation; Light pollution
	Consumption of goods (eg. Oil)	Consumption of natural resources; Generation of waste; Habitat loss; Biodiversity impacts
	Generation of waste (eg. Oil)	Consumption of space for waste disposal; Potential contamination of water or soil; Habitat loss
	Exhaust emission	Release of greenhouse gases and atmospheric pollution
	Use of dangerous goods (eg. Batteries)	Potential contamination of air, water or soil; Risk to human health
	Generation of noise	Disturbance to community; Habitat degradation
<b>Operations</b>		

Sample only.  
To be filled in

# Risk Assessment

Risk Assessment // insert name here					
Step No: Logical sequence	Sequence of Basic Job Steps documented in the Procedure, Work Instruction and project plans. Break down Job into steps.  Each step should be logical and accomplish a major task.	Potential Safety & Environmental Hazards/Impacts at the site of the Job  Identify the actual and potential health and safety hazards and the environmental impacts associated with each step of the job.	Risk Rating  Refer to the risk matrix or HSEQT.PRO. Risk Mgt	Recommended Corrective Action or Procedure  <i>Determine the corrective actions necessary to reduce the risk to as low as reasonably practical (ALARP) refer to HSEQ.PRO.Risk Mgt. The risk must be reduced or controlled to ALARP before work commences.</i>  Document who is responsible for implementing the controls to manage each hazard identified.	Risk Rating refer to the risk matrix or HSEQT.PRO.Risk Mgt
1.					
2.					
3.					
4.					
5.					

# Audit



<b>Process:</b> insert// <b>Procedure:</b> Insert //		Date:		Audited by:	
		Location of Audit:		Area Mgr/Supervisor:	
Item	Question	Evidence Sited	Comments		Conformance Score 0,3,5
1.					
2.					
3.					
4.					
5.					
6.					
7.					
AUDITOR'S SIGNATURE:		CONFORMANCE SCORE: / 25		0 – Non-Conformance	
SAFETY REP'S SIGNATURE:		CONFORMANCE %:		3 – Continuous Improvement Opportunity	
				5 – Total Conformance	