Annual Self-Evaluation Form

Code of Practice

PROCESS SAFETY

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

SCIC
SINGAPORE CHEMICAL INDUSTRY COUNCIL

Guidelines for the Implementation of the Management Practices

1. INTRODUCTION

Definition

The Process Safety Code is designed to prevent fires, explosions and accidental chemical releases. The Code comprises a series of management practices that reflect this goal, with the expectation of continual performance improvement for each management practice. The practices are based on the principle that facilities will be safe if they are designed according to sound engineering practices, built, operated and maintained properly and periodically reviewed for conformance.

Process safety is an interdisciplinary effort. Consequently, the Code is divided into the following four elements:

1. management leadership
2. technology
3. facilities and
4. personnel

Each element is composed of Management Practices. Individually, each Practice describes an activity or approach important to preventing fires, explosions and accidental chemical releases. Collectively, the Practices encompass process safety from the design stage through operation, maintenance and training.

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The process safety management program for each facility is complemented by workplace safety and health programs, as well as waste and release reduction programs which address and minimize releases and waste generation. These three programs, and others, will help assure that member facilities are operated in a manner that protects the environment and the health and safety of personnel and the public.

The scope of this Code includes manufacturing, processing, handling and on-site storage of chemicals. This Code must be implemented with full recognition of the community's interest, expectations and participation in achieving safe operations. Process safety involves the integration of many functions including design, construction, operations and maintenance.

The code covers the safety of all facilities/processes within chemical manufacturing sites. It also covers prevention of any offsite effects of manufacturing or long term health effects arising from exposure to materials or activities involved in manufacturing.

The code interfaces with all other Responsible Care Codes and particularly with those for Employee Health and Safety and Environment Protection. The Process Safety Code deals with safe and environmentally sound chemical plant design and operation and as such complements the Product Stewardship Code, which deals in particular with the correct design, use and disposal of chemical products.

Process Safety - The application of management and engineering principles to prevent fires, explosions and accidental chemical releases at chemical process facilities.

Sound Engineering Practice - The application of mandatory codes and standards supplemented by the use of voluntary codes, standards and guidelines, tempered by professional judgment.

Safety Critical Jobs - Jobs, activities and tasks, if improperly performed, that have the potential to significantly increase the risk of a fire, explosion or accidental chemical release.

Accidental Chemical Release - Unplanned, sudden releases of chemicals from manufacturing, processing, handling and on-site storage facilities to the air, water or land. It does not include permitted or other releases.

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Explanatory Note (how to use the Part 2 and filling blanks in the last 2 columns of the Table):

This Annual Self-Evaluation Form consists of the followings:
- Part 1 of "INTRODUCTION", and
- Part 2 of "SELF-EVALUATION FORM" that consists 15 management practices for the Process Safety Code.

In part 2, the description of each management practice is in the first column of the Table "MANAGEMENT PRACTICE" and its sub-clauses are in the second column "GUIDELINES FOR IMPLEMENTATION". The applicability of the Management Practice to the various categories, i.e. Manufacturer (M), Logistics & Service Providers (LSP) and Trader (T), are indicated above the Management Practice title.

The column "Status" is the result of the evaluation. Company needs to put a tick in the boxes under the "Status" column to indicate if they have met the requirement of the guidelines of implementation, i.e. Yes, No, NA.

The following example illustrates evaluation and filling the result of evaluation:

> *After evaluating a management practice (or its sub-clause), the Company concluded it met all the necessary requirements described in the "Guidelines for Implementation", the Company should put a tick in the box under the 'Yes' column and indicate clearly the index where evidence can be found. On the contrary, if the Company concluded it did not meet the requirements described in the "Guidelines for Implementation", the Company should put a tick in the box under the 'No' column. In the event that the Company does not fall into the category that are applicable for the management practice, the Company should put a tick in the box under the 'NA' column.*

Companies shall evaluate in an objective manner to what extent their current practices meet the intent of the clause; in a manner appropriate to the size, complexity and risk of the business.

The annual self-evaluation submission is used by the Country Association (SCIC) to assess progress of Responsible Care implementation and awarding the SCIC Responsible Care Awards. Company is required to attach documents to substantiate and justify their results of evaluation. In view of the large volume of documents likely to be attached with this Annual Self-Evaluation Form, documents should be neatly filed with clear document indexes in one of more hard-paper files for easy referencing. Document indexes pointing evidences should be written in the blanks of the "Document Index" column of the Table to complete the submission. The completed Annual Self-Evaluation Form with all attached documents should be sent to SCIC as a complete set of the annual submission.

2. SELF-EVALUATION FORM

Management Practice	Guidelines for Implementation	Status			Evidence/Remarks
		YES	*NO*	*NA*	
Applicability - LSP/M **1. Leadership** Demonstrates leadership by the senior management through policy, participation, communications and resources (manpower, capital, training etc.,) commitments on achieving continual improvement of performance	1.1 Policy supporting process safety is displayed at all sites.				
	1.2 A site leader visibly demonstrates the process of planning and budgeting for annual resources allocation, and communicates regarding the process safety of site operations.				
	1.3 Employee's concerns about process safety are reviewed and taken into consideration for continual improvement.				
	1.4 Process safety issues due to changes in facilities and process are communicated to employees in a timely manner.				
	1.5 Demonstrate management and employee involvement / participation in process safety programmes or initiatives.				
Applicability - LSP/M **2. Accountability.** For performance against specific goals for continual improvement	2.1 A system in place for reporting on progress towards process safety goal setting per site plan.				
	2.2 Goals for process safety are evaluated annually against actual performance.				
	2.3 Specific plans are developed for high risk process safety issues.				
Applicability - LSP/M **3. Measurement** Performance and audits for compliance and implementation of corrective	3.1 Establish, measure and review effective process safety leading and lagging indicators for continual improvement in performance.				
	3.2 A system is in place for formal assessment of audit findings related to process safety with appropriate corrective actions.				

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Management Practice	Guidelines for Implementation	Status			Evidence/Remarks
		YES	*NO*	*NA*	
actions and continual improvement.	3.3 Audits results are reported to site leadership.				
	3.4 Audits recommendations are implemented as per planned schedule and track to closure timely.				
Applicability - LSP/M **4. Investigation and Reporting.** Performance and audits for compliance and implementation of corrective actions and continual improvement.	4.1 A program is in place for reporting all process safety related incidents involving critical equipment / instruments failure.				
	4.2 A process is in place for reporting all process safety incidents which could result in fire, explosion or accidental chemical release.				
	4.3 Process incident investigation is led by a trained facilitator and carried out by a multidisciplinary team including a subject matter expert.				
	4.4 Process safety investigation report must include root cause(s) and corrective actions.				
Applicability - LSP/M **5. Sharing & Learning** Relevant Process Safety knowledge from incidents with industry, government and community.	5.1 Company representatives participate in industry and technical forums to keep up to date on best practices and share experiences related to process safety information.				
	5.2 A system is in place for sharing relevant process incident lessons learned.				
Applicability - LSP/M **6. Emergency Management**	6.1 Emergency scenarios include the assessment of possible impact from neighbouring facilities both inside and beyond site boundaries.				
	6.2 Identify the type, likelihood and consequences of process related emergency scenarios for the facility.				
	6.3 Emergency operating procedures are available for each unit.				

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		YES	*NO*	*NA*	
	6.4 Emergency equipment is identified, documented, operated and maintained to a standard at least equivalent to the critical items of process plant.				
	6.5 Conduct regular refresher training on the process related emergency operation.				
	6.6 Emergency process scenarios are tested annually, using practice drill and/or simulated (table top) techniques, as appropriate to the risk.				
Applicability - LSP/M **7. Risk Assessment, Process Hazard Identification and Risk Management**	7.1 The siting of new or modified facilities shall be determined by a policy which takes into account the impact on the environment, the community and adjacent industries.				
	7.2 The design and operation of the facility and processes are in compliance with all relevant acts, regulations, codes and engineering practices.				
	7.3 Process Engineering and Design procedures take into account the outcome of Process Hazard Analysis/ Risk Assessment.				
	7.4 Facility design, construction and maintenance using sound engineering practices are consistent with recognized codes and standards.				
	7.5 Reviews of Process Safety Hazards take place to assess the actual operation of the facility against established standards.				
Applicability - LSP/M **8. Management of Change**	8.1 Pre-Setup Safety Review is completed before new facilities are commissioned.				
	8.2 MOC is used to manage any changes in materials, processes or equipment, including signed authorization of the change at the appropriate level.				

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		YES	*NO*	*NA*	
	8.3 Emphasis is placed on 'temporary MOC' arrangements initiated at operating plant level.				
	8.4 Any authorized change is accomplished by appropriate updating of documentation and operating procedures; with necessary re-training.				
Applicability - LSP/M **9. Documentation and update**	9.1 Operating instructions are documented and readily available for all significant activities including start up and shut down, utilities failure, safe operating limits and recommended responses and mitigate the consequences of deviation from the safe operation.				
	9.2 Operating manuals and instructions are reviewed as per plan and readily accessible.				
	9.3 Original process design, engineering design and operating instructions are retained and regularly updated to reflect changes made.				
	9.4 SDS are available for all process chemicals and reviewed every 5 years.				
Applicability - LSP/M **10. Mechanical Integrity Quality Assurance**	10.1 Maintenance procedures are established to ensure facility integrity. Current list of process safety Critical Equipment and Instruments is maintained.				
	10.2 Records are maintained regarding equipment / instrumentation performance, including failures and breakdowns.				
	10.3 Actions taken to correct deficiencies after breakdowns are documented and recorded in equipment history records.				
	10.4 Appropriate predictive maintenance programs are used to further ensure the integrity of protection systems.				

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		YES	*NO*	*NA*	
Applicability - LSP/M **11. Layer Of Protection Analysis**	11.1 Process safety instrumentation, including alarms, and emergency shutdown devices are incorporated into the facility design.				
	11.2 Emergency / Safety instrumentation, including alarms and emergency shutdown devices are tested regularly.				
	11.3 Emergency plans for high risk emergency scenarios have been developed and documented.				
	11.4 The emergency plans are reviewed and updated annually.				
Applicability - LSP/M **12. Skills, Knowledge & Standard Operation Procedures**	12.1 The skills, knowledge and qualification requirements of process safety related position have been assessed and documented.				
	12.2 Standard operating procedures for safety critical tasks/operations are established and documented.				
Applicability - LSP/M **13. Training for employees**	13.1 Training provided to all employees for proficiency in safe work practices, skills and knowledges are necessary to perform in competence to their process safety responsibilities.				
	13.2 Refresher training is provided for all procedures and practices associated with process safety.				
	13.3 Procedures are in place to assess the understanding and competency of each incumbent of a safety critical job at regular intervals.				
	13.4 Special training is conducted for new or modified processes and equipment.				
Applicability - LSP/M **14. Programs design for employees' Fit for Duty**	14.1 Fitness for duty in terms of physical and mental condition is evaluated during pre-employment/ employment.				

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		YES	*NO*	*NA*	
	14.2 Supervisors are trained to recognise symptoms related to fitness for duty among employees.				
Applicability - LSP/M **15. Contractors Management**	15.1 Contractors selection process (taking into consideration HSE performance) is in place.				
	15.2 Contractors comply with all HSE requirements of the Company.				
	15.3 In-house HSE training is provided.				
	15.4 Contractors are routinely trained on Safety Induction Course.				