الرعاية المسئولة
التـزامـنا نحـو الاستدامة
RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

gpca
GULF PETROCHEMICALS
& CHEMICALS ASSOCIATION
الاتحاد الخليجي للبتروكيماويات والكيماويات

3

PRODUCT STEWARDSHIP CODE

Acknowledgements

Originally Developed by

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CHAPTER ONE

Introduction

History of Responsible Care®
In December 2009, the Gulf Petrochemicals and Chemicals Association (GPCA) Board of Directors formally adopted the Chemical Industry's initiative called 'Responsible Care®'.

Responsible Care was created in 1984 by the Canadian Chemical Producers' Association, with the clear intent of establishing the following goals:
• Improved chemical processes
• Enhanced practices and procedures
• Reduction of every kind of waste, accident, incident, and emission
• Reliable communication and dialogue
• Heightened public scrutiny and input

Responsible Care® has become an obligation of membership in GPCA Member Companies. A central idea behind Responsible Care® is the need to adopt philosophy of continuous improvement. It is not a program that provides a checklist of activities for member companies to implement. It will be improved continually in light of new information, new technology, new expectations, and a constant reassessment of performance and objectives. Responsible Care® is a license to operate..

Management Codes

Responsible Care® is underpinned by GPCA through the implementation of a number of Management Codes as indicated below.

Management Code	Document Number
Community Awareness and Emergency Response (CAER)	GPCA-RC-C01
Distribution	GPCA-RC-C02
Product Stewardship	GPCA-RC-C03
Security	GPCA-RC-C04
Health & Safety	GPCA-RC-C05
Process Safety	GPCA-RC-C06
Environmental Protection	GPCA-RC-C07

Each of the above Codes includes expectations, termed Management Practices. The Management Practices provide specific technical requirements and guidance for Companies to fulfil their responsibilities in terms of Responsible Care® and can be used as a self-assessment tool.

Objective – Product Stewardship Code

The purpose of the Product Stewardship Code is to make health, safety and environmental protection an integral part of designing, manufacturing, marketing, distributing, using, recycling and disposing of organization's products. The Code provides guidance as well as a means to measure continual improvement in the practice of product stewardship.

The scope of the Code covers all stages of a product's life. Successful implementation is a shared responsibility. Everyone involved with the product has responsibilities to address society's interest in a healthy environment and in products that can be used safely. All employers are responsible for providing a safe and healthy workplace, and all who use and handle products must follow safe, healthy and environmentally sound practices.

The Code recognizes that each company must exercise independent judgment and discretion to successfully apply the Code to its products, customers and business.

This Code is composed of Management Practices as indicated in Table 1 - Product Stewardship Management Practices. Individually, each Practice describes an activity or approach to implementing the requirements of this Code.

Codes of Management Practices Links to RC 14001:2015 Standard

The implementation of Product Stewardship Code will help in fulfilling the requirements of the Responsible Care® management system specification RC 14001. Notably, the implementation will help in closing gaps related to Product Stewardship requirements of the specification, particularly those requiring a system to facilitate the flow of hazard information to all elements of the value chain

	RC 14001 Responsible Care® Elements	Product Stewardship Management Practices									
		ST-1	ST-2	ST-3	ST-4	ST-5	ST-6	ST-7	ST-8	ST-9	ST-10
4.1	Understanding the organization and its context										
4.2	Understanding the needs and expectations of interested parties										
4.3	Determining the scope of the EHS&S management system										
4.4	EHS&S management system										
5.1	Leadership and commitment	X									
5.2	Policy	X									
5.3	Organizational roles, responsibilities and authorities	X	X					X			
6.1	Actions to address risks and opportunities										

6.1.2	EHS&S aspects			X	X	X	X				
6.1.3	Compliance obligations (Legal & Other Requirements)			X		X	X				X
6.2	EHS&S objectives and planning to achieve them	X									X
6.2.2	Planning actions to achieve EHS&S objectives					X	X				
7.1	Resources	X									
7.2	Competence						X				
7.3	Awareness						X	X			
7.4	Communication					X		X		X	X
7.5	Documented Information			X							
8.1	Operational planning and control					X					
8.2	Emergency preparedness and response					X			X		
9.1	Monitoring, measurement, analysis and evaluation					X					X
9.1.2	Evaluation of compliance										
9.2	Internal audit										X
9.3	Management Review	X									X
10.2	Nonconformity and corrective action					X					X
10.3	Continual Improvement										X

Table 1 – Product Stewardship Management Practices

Wherever possible these Management Practices should be included in the member company's existing programs which address the Hazard Communication related requirements. More so, these practices should be incorporated into the existing programs in such a way that these are part of the regular management review cycle.

Chapter 2 includes the Management Practices along with guidance, suggested activities / examples and self-assessment notes which can be used as a self-assessment tool to assist member companies identify gaps and an effective implementation plan to address those gaps.

CHAPTER TWO

Management Practices, Guidance, Suggested Activities / Examples and Self-assessment

ST-1: Leadership Commitment

Leadership by senior management through policy development, participation, communications and resource commitments to establish and maintain an effective Product Stewardship program.

1.0 Guidance

The objective of this Management Practice is to set the driving force for the Product Stewardship Code. To this end, senior management shall first adopt a policy that reflects the company's vision of product stewardship. This policy shall state clearly how senior management expects product stewardship to be managed within the company.

The commitment of resources, both human and financial, are critical factors in the implementation activities of Product Safety and Stewardship programs. Although resources can vary from one company to another, but the essential requirements should stay consistent with the organization's objectives.

To be effective, senior leaders shall drive continual improvement through a published policy(s), active participation and communication concerning product stewardship program, establishing, tracking/reporting of objectives and goals, and providing sufficient and qualified resources.

1.1 Suggested Activities / Examples

Example No. 1

Establish a formal corporate Product Stewardship policy that describes your company's Product Stewardship philosophy and mission or integrate Product Stewardship program needs into existing policies such as Health, Safety, Security, Environmental and Quality integrated policy.

Example No. 2

Benchmark and collect information on other companies' Product Stewardship policies in preparation for your own company's policy development. Review RC14001 clause 4.2, to understand main elements of the policy. Draft a policy that best represents the organization's operations, business and goals (Avoid being to general). Distribute the policy to key internal stakeholders and gather feedback during development. Seek approval of the final policy draft from senior management.

Example No. 3

Effectively communicate policy to all employees and make sure they understand their responsibilities, management's expectations for employees, the role they play in incorporating the Product Stewardship Code, and to listen and respond to employee's feedback and address their concerns. Review the policy(s) periodically, as appropriate. It may be recommended to have an integrated policy to address product stewardship, rather than a number of standalone policies. The policy shall be available to staff and public. Develop guidelines to help each business group or corporate functional area implement the policy.

Example No. 4
Senior Management may appoint a team with assigned roles and responsibilities to ensure effective implementation, maintenance and continual improvement of the Product Stewardship program. The team shall collect data and report to senior management, and capture management's decisions, translate it into objectives and action plans to be realized in a timely manner (management review).

Example No. 5
Ensure sufficient manpower, infrastructure, financial resources, IT and communication systems to implement and maintain Product Stewardship programs, and can grow to meet future expectations, plans, and requirements. Identify Product Stewardship training needs and allocate budget.

1.2 Self-assessment
• Has the company senior management endorsed a written Product Stewardship policy and published clear directions and expectations for the implementation of the program? Does it fulfill requirements of RC14001 clause 4.2? Is it communicated to all concerned? Is it reviewed and updated periodically?

• Are these expectations translated into specific overall objectives for each significant area (Life Cycle Stages)?

• Are the agreed Product Stewardship plans endorsed formally by the senior management and communicated widely?

• Are regular reports and other means of progress monitoring of the Product Stewardship plan and evaluation of compliance generated and reviewed by senior management at frequencies appropriate to the product risk and need for improvement?

• Do senior management regularly review key Product Stewardship activities and key company Product Stewardship goals, progress and performance, and review relevant legal and other obligations and workers EHS&S concerns (management review)?

• Are sufficient resources allocated to manage, sustain and improve the PS program?

• Are resources needed reassessed periodically to assure adequacy?

ST-2: Accountability
Setting clear accountabilities, authorities, roles and responsibilities to achieve Product Stewardship program's goals and ensure continual improvement.

1.0 Guidance
Senior management shall ensure that the authorities and responsibilities of employees and contractors are understood, including those roles that engage with suppliers, customers, contract manufacturers, carriers, distributors, contractors and third-party logistics providers. Workers assigned these roles are informed and held accountable for their performance.

1.1 Suggested Activities / Examples
Example No. 1
Develop a Product Stewardship Management Practices / Job Functions matrix.

Develop key performance indicators on action plans that can trigger management commitment as well as individuals / departments who have Product Stewardship responsibilities. Ensure

performance of Product Stewardship objectives and continual improvement are connected to key responsible parties and compensation criteria.

1.2 Self-assessment

• Are accountabilities, authorities, roles and responsibilities clearly defined in each worker's job description, in order to effectively implement, maintain and improve the Product Stewardship program?

• Is a process owner set for each KPI and objective?

• Are authorities and responsibilities aligned with workers competency?

• Are some workers or a team authorized to communicate Product Stewardship program's performance to senior management (management review), including incidents and workers EHS&S concerns? In addition to communicate EHS&S information to all other internal and external stakeholders?

ST-3: Product Information

Identify a process to develop and maintain information on Health, Safety, Security and Environmental hazards, intended uses and reasonably foreseeable exposures from new and existing products.

1.0 Guidance

Organizations shall have an ongoing process to gather and review existing Health, Safety, Security and Environmental (EHS&S) information to determine if it is accurate, current and complete. Sources of information may include materials' suppliers, reports, product use, customer feedback / surveys, and sales and marketing personnel observations at customer's sites. Utilize information from similar industries publications, incidents and recognized international organizations.

1.1 Suggested Activities / Examples

Example No. 1

Identify sources of information for new products, such as:

Safety Data Sheets (SDS) and labels of raw materials from suppliers.

• Governmental regulatory requirements.
  E.g., Organization for Economic Cooperation and Development (OECD) / Screening Information Data Sets (SIDS) dossiers.

• Databases.
  E.g., Integrated Risk Information System (IRIS), European Chemical Substance Information System (ESIS).

• Reference books.

Maintain awareness of new developments in the health, safety, security and environmental fields, e.g., applicable legislation by attending conferences and meetings, reading journals, and talking with peers inside and outside the company. Consider subscribing to external service providers that provide periodic updates of regulatory developments, scientific publications and findings, etc.

Conduct surveys and obtain feedback from employees and contractors, customers and distributors on the use and misuse of products. In addition to the EHS&S problems they may have encountered

in handling, use or disposal of your products, including adverse effects, impacts, incidents and near misses.

Identify types of tests to be conducted, such as toxicological, eco-toxicological, Microbiological, physical and chemical properties. Identify potential use and misuse of products as well potential exposures. Identify applicable legislations / standards requirements and restrictions. Be aware of public concerns, industry or company's voluntary commitments and company's standards. Work with relevant functions to generate the types of product tests and obtain data needed for EHS&S review. Develop a checklist of EHS&S information to be gathered to adequately characterize and manage EHS&S aspects of product risks. Review and compile information gathered to ensure that it is accurate, current, complete and retrievable in a timely manner.

Example No. 2
Communicate EHS&S information to employees, contractors, customers, distributors in the form of product Safety Data Sheets, product labels, bulletins, product manuals, safety wall charts, seminars, training, etc.

Example No. 3
Consider developing a centralized information database, e.g., SAP for managing EHS&S information gathered that can also serve as a platform for information sharing as well as a valuable resource. Control and monitor access to confidential information.

Example No. 4
Consider developing guidance for evaluating the significance of new EHS&S information. New EHS&S information may justify the revision of a Safety Data Sheet or product label, preparation of a new warning or even implementing a product recall. Previously prepared guidance can help triggering such an activity if needed and may limit inefficient case-by-case responses. Update EHS&S information as necessary in databases and distribute new information to all stakeholders.

1.2 Self-assessment
- Do all existing products have information that is up-to-date, available and retrievable in a timely manner?
- Is exposure information established and maintained?
- Does a procedure or process exist for developing and maintain information on Health, Safety, Security and Environmental hazards, intended uses and reasonably foreseeable exposures from new and existing products?
- Does a procedure or process exist for obtaining exposure information from end-user and manufacturing communities?
- Have all new products' test results been determined before commercialization, including animal or human toxicity, eco-toxicity and chemical and physical properties that affect exposure or environmental impact?
- Are effective communication channels established to communicate EHS&S information to all internal and external stakeholders?
- Are SDS and other administrative controls prepared and updated consistent with legal requirements and relating to the best available information?

ST-4: Risk Characterization

Establish a system to characterize and re-evaluate risk for new and existing products based on health, safety security and environmental hazards and reasonably foreseeable exposure information along the value chain.

1.0 Guidance

Companies characterize the potential risks of their products by using valid, reliable, and relevant scientific studies and information. By giving such studies and information appropriate weight, companies determine potential risks associated with relevant levels of exposure under expected conditions of use. Risk characterizations include consideration of information about downstream uses and reasonably anticipated exposures to people. Changes to product composition, manufacturing process, internal and external incidents, and applicable regulations or standards will required further reviews and characterizations.

1.1 Suggested Activities / Examples

Example No. 1

Develop a procedure for product risk characterization that would define roles and responsibilities. Identify information required for product hazard identification, product toxicity / eco-toxicity assessment, product exposure assessment, creation of Hazard Ratings and Exposure Ratings tables, Risk Matrix and Risk Characterization methodology. Identify situations when re-evaluation is required and review the procedure where appropriate.

Example No. 2

Conduct product risk characterization during the product development stage. Form a multi-disciplinary team that should include Manufacturing, Research & Development (R&D), EHS&S, Distribution, Sales & Marketing staff to participate in product risk characterization. External experts may be included in the team as required. Evaluate the adequacy of information gathered to determine for example, whether additional tests are needed. Consider developing a checklist of questions to be answered that can be helpful. Assign Hazard Ratings and Exposure Ratings and determine risk level based on the Risk Matrix. Document the product risk characterization clearly so that it can be easily integrated into subsequent risk management activities, updating, and required disclosures.

Example No. 3

Product risk characterization should be re-evaluated periodically or whenever there is new information available, changes to production process, changes to product composition, changes to applicable regulations / standards, incidents related to product handling, use, transportation, disposal etc. as well as new markets and uses. Incorporate knowledge of current products and processes, and employee's, customer's and distributor's feedback when conducting a re-evaluation. Record the basis for technical decisions made in process design and provides support in reviewing the basis for decisions. Before adopting product specifications or process changes, consider how they may alter product properties, use or quality.

1.2 Self-assessment

• Is there a process in place for risk characterization?

• Are all high risk items identified?

• Are sufficient controls established for each high risk?

- Is there a procedure in place for conducting a EHS&S risk assessment based on hazard and exposure information?
- Is the procedure used on existing products and known uses?
- Is the procedure used on new products prior to commercialization?
- Do consultation processes take place between business, technical and EHS&S specialists for risk assessment, particularly during product planning and development?
- Are results of risk assessments documented and relevant outcomes communicated to stakeholders?
- Is a periodic assessment of the risk carried out, taking into account changes in processes or product use and emerging environmental and health science?

ST-5: Product Safety Management

Develop a system to identify, document, and implement health, safety, security and environmental risk management actions so that products can be safely used for their intended purposes.

1.0 Guidance

Organizations shall manage the risk involved in production and use of chemicals based on product risk characterization. Risk management actions should be based on technical, ethical, societal and business issues surrounding the product. Risk actions taken can range from no action to reformulation or product recall. Risk management actions may require modifications based on substantive new information on hazards, uses and exposures so that products can continue to be safely used for their intended purposes.

1.1 Suggested Activities / Examples

Example No. 1

Identify high risk items as determined from Product Risk Characterization as priority to look into possible measures to reduce risk to As Low As Reasonably Practicable (ALARP) levels. Propose and select Risk Management actions in the following order of hierarchy:

- Elimination; e.g., do not manufacture product, removal from market.
- Substitution; e.g., review composition of product to substitute hazardous component with a less hazardous component.
- Engineering controls: e.g., ventilation.
- Administrative controls; e.g., development of safe working procedures and or warning signs.
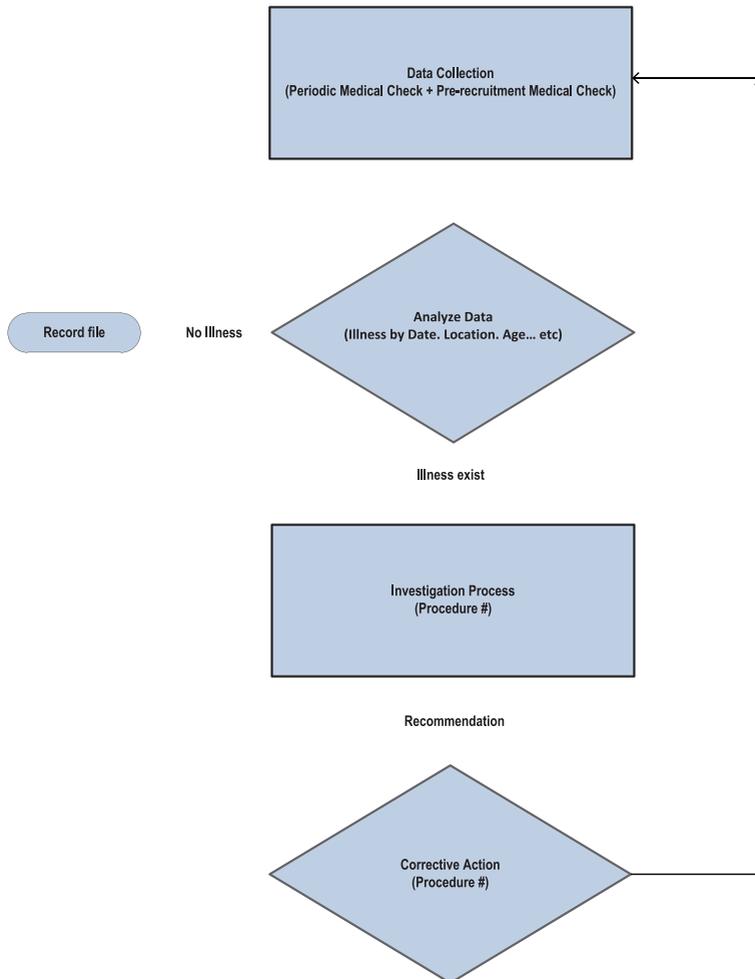- Personal Protective Equipment; e.g., recommendations for goggles, gloves, etc.

Consider establishing exposure limits and guidelines or consistent risk threshold criteria. Benchmark against trends in similar industries.

Personnel involved in Product Risk Characterization should also be involved in Risk Management actions.

Example No. 2

Form committees or task forces, where appropriate, to determine organizational changes that are required to manage Product Stewardship requirements.

Form a team or a committee that can foster the product stewardship actions, follow up on actions, aims to synchronize and align all Product Stewardship processes together. As an example of this synchronization, some of GPCA member companies established a process linking medical services findings with investigation teams from other departments to identify, analyze and mitigate hazards' impact, as the following diagram shows:

```
                    ┌──────────────────────────────────────────────┐
                    │              Data Collection                 │
                    │  (Periodic Medical Check + Pre-recruitment    │
                    │             Medical Check)                    │
                    └──────────────────────────────────────────────┘


                                  ◇ Analyze Data
   ( Record file )   No Illness   (Illness by Date. Location. Age... etc)


                                Illness exist

                    ┌──────────────────────────────────────────────┐
                    │            Investigation Process             │
                    │               (Procedure #)                  │
                    └──────────────────────────────────────────────┘

                              Recommendation

                                  ◇ Corrective Action
                                    (Procedure #)
```

Example No. 3

Review risk management actions periodically or whenever there is new information available, changes to production process, changes to product composition, changes to applicable regulations / standards, incidents related to product handling, use, transportation and disposal etc. Incorporate knowledge of current products and processes and employee's, customer's and distributor's feedback when conducting a review.

Example No. 4
Use GHS principles when generating SDSs and effectively communicate the hazards of your products to your stakeholders. (Reference: Code of Practice for the Introduction of the Global Harmonized system (GHS) in Gulf Cooperation Council (GCC) countries)

1.2 Self-assessment
• Are systems in place to assure product safety management including monitoring, preventing and mitigating hazards impacts (especially in High Risk products and processes)?

• Are systems in place to comply with Legal and other requirements?

• Are systems in place for verification of conformity and Legal compliance?

• Are the risk management actions appropriate to the product risk identified, including but not limited to the following?
    i.   New products
    ii. New distribution channels or markets
    iii. New intended use
    iv. Sales into a new / different market segment
    v.   Change in product ingredients or formulation
    vi. New or changed production process
    vii. New safety, security, health or environmental information
    viii. Change in legal requirements
    ix. Discontinuing sale of product.
• Do all workers know their roles in implementing the Product Stewardship program?

• Are Mock drills and audits in place to assure adequacy of the established controls, and identify system's gaps?

• Are risk management actions documented, implemented and reviewed?

• Is information provided in a convenient and usable form including Safety Data Sheets (SDS) and labels?

• Are product packaging and labels reviewed periodically for consistency with the updated SDS and new legislative requirements?

• Is a team or a committee formed to foster the product stewardship actions, follow up on actions, aims to synchronize and align all Product Stewardship processes together?

ST-6: Product and Process Design

A process that evaluate the impacts of innovation, design, development, and improvement of products, their manufacture, and uses on health, safety, security and the environment throughout the product lifecycle.

1.0 Guidance
The health, safety, security and environmental attributes of the product throughout its entire lifecycle shall be addressed at the beginning, during the concept and design (or redesign) phases. Re-evaluation should occur on a periodic basis or whenever changes to the product or process are contemplated. Insights and contributions from employees in all functional areas that may affect health, safety, security and the environment should be incorporated into the review. These functional

areas include R&D, Manufacturing, Distribution, Sales & Marketing and Product Stewardship.

The need for proper energy and natural resource utilization should also be addressed, as they are important considerations for reducing potential adverse environmental impacts and achieving sustainable development.

1.1 Suggested Activities / Examples

Example No. 1

Establish and document a process to review and evaluate product and process design at key stages of development for new and for existing products. Form a multi-disciplinary team to conduct Life Cycle Analysis (LCA) of products to identify potential health, safety, security and environmental impacts and possible risk reduction opportunities. Team members should have representatives from R&D, Procurement, Sales & Marketing, Manufacturing, Distribution, EHS&S and Product Stewardship. Develop a questionnaire or checklist of questions and propose a series of activities for each stage of product development. Make a decision at the end of each stage whether to proceed to the next stage or to modify the product or processes and repeat the current stage or to terminate further activity with respect to the product or process change. Process Hazards Analysis (PHA) is widely used in process designing and redesigning phase; chose most suitable PHA methodology based on the nature of process change.

Example No. 2

During product conception, gather EHS&S information of raw materials, intermediates and product, as well as the intended use / users of product, potential production volume and targeted markets. Make preliminary EHS&S assessments against customer's requirements and company's policy as well as regulatory compliance assessments, e.g., chemical notification / permits. Public concerns (if any) should also be taken into consideration during the design of products and processes. Identify any EHS&S, regulatory, societal, issues, concerns, requirements and effects associated with the new product throughout the product's life cycle. Conduct training for R&D, Manufacturing, Sales & Marketing staff to design products and processes to underscore Product Stewardship objectives.

Example No. 3

During product process development, gather more EHS&S information of raw materials, intermediates and product, e.g., physical / chemical properties data, toxicological, eco-toxicological data. Make EHS&S assessments, e.g., manufacturing, storage, distribution issues and considerations, product risk characterization and risk management actions as well as regulatory compliance assessments, such as restrictions on use of certain chemical substances. Prepare product EHS&S documents such as Safety Data Sheets, product labels. Systematically analyze each process waste, i.e., routine scrutiny of opportunities to reduce energy consumption, recycle by-products, or reduce environmental impacts resulting from processing. Design specifically to minimize waste, by-products and emissions resulting from use of the product or make product or process modifications to reduce   or eliminate by-products and wastes. Consider potential health, safety, security and environmental impacts as important criteria when selecting production equipment and determining the best practices to manufacture the product. Consider the need for Product Stewardship training for employees and/ or customers.

Example No. 4

After product has been commercialized, educate and train customers regarding regulations as

well as safe and effective product use, recycling and disposal. Evaluate ability and willingness of contract manufacturers, distributors and customers to use products appropriately, according to the degree of product risk. Monitor and evaluate product's health, safety, security and/or and environmental impacts, e.g., potential emissions, human exposures and identify impact reduction through life cycle evaluation of raw materials, processes and products. Establish systems to anticipate and respond to significant changes throughout the product's commercial lifetime, e.g., market change, customer applications, process, manufacturing sites and regulations. Review and update product risk characterization and risk management actions as appropriate. Review product EHS&S documents such as Safety Data Sheets periodically and modify product labels as required. Inspect and maintain product-manufacturing operations so that production equipment will operate as designed under original specifications and do not pose health, safety, security and environmental risks by the production of unanticipated by-products or contaminants.

Example No. 5
During post commercialization, gather and evaluate feedback on employee's, contractors' customer's and distributor's suggestions for improvement in product and process design. Make modifications to the product and/or process, as appropriate. Sales & Marketing staff can hold meetings with customers to discuss product improvements or modifications under consideration. Consider EHS&S impacts on the process and on end product composition resulting from changes in processes. Review specifications to consider whether minor components that could pose health, safety, security and environmental impacts are included in the specifications. Determine if there are any new uses / misuses for the product and take steps to stop or prevent misuses that could result in potential harm to humans or the environment. Review and update product risk characterization and risk management actions as appropriate based on new information obtained, e.g., new hazard data, new uses / misuses etc. Provide additional guidance and training, as appropriate. Identify new marketing opportunities and potential concerns. New company standards for product and container design could be developed in an attempt to minimize adverse impacts. Establish waste reduction programs to systematically analyze each process waste. For example, a review program could routinely scrutinize opportunities to reduce energy consumption, recycle by-products, or reduce environmental impacts resulting from processing. Establish a review system for evaluating the net impact of proposed product or process modifications. Look for product or process modifications to reduce or eliminate by-products or wastes.

Example No. 6
Consider working with management to put an incentive plan in place to insure sustainability of employee's, contractors 'and other stakeholders' commitment toward the end of the project.

1.2 Self-assessment
- Is a process established to review and evaluate product and process design at key stages of development for new and for existing products?
- Is the review team enriched with multi-discipline members?
- Are processes in place for review of EHS&S impacts as part of a decision on commercialization
- Are more information gathered and analysis made during product process development, during and after commercialization? Is the system adjusted accordingly?
- Are recycling, preventing depletion of natural resources and waste management considered?

- Are Awareness and training conducted continually though key stages of the process?

ST-7: Competency

All employees and contractors conducting works that affect the performance of Product Stewardship program shall be competent on the bases of appropriate education, training and experience.

1.0 Guidance

All employees and contractors who are involved with products shall have sufficient education and/or training and/or experience necessary to understand product (and packaging) hazards, proper use, handling, reuse, recycling and disposal procedures. A verity of disciplines are required to tackle all aspects of the Product Stewardship program. A feedback system must exist for workers to report new uses, misuses, adverse effects and other Product Stewardship concerns.

1.1 Suggested Activities / Examples

Example No. 1

Establish education and training programs tailored to specific job functions. Training needs can be identified with the aid of a training matrix. An example is shown in the table below:

Training Programs	Functional Group				
	R&D	EHS&S	Manufacturing	Sales & Marketing	Distribution
Product and Process Design	X		X	X	
Product Risk Characterization	X	X	X	X	
Product Risk Management	X	X	X	X	X
Product Hazards / Risks	X	X	X	X	X
Product Use(s) / Misuse(s)	X			X	
Product Storage & Handling	X	X	X	X	X
Product Recycling / Disposal	X	X	X	X	X
Product Applicable Regulations	X	X	X	X	X
Product Feedback System	X	X	X	X	X

Training should be part of new employees and contractors orientation and should become a basic job requirement for the worker. Support from Human Resource, Training and Communications Departments may be required. Refresher training should be conducted at appropriate intervals or when new information becomes available. Continually assess workers competency gaps based on their assigned roles and responsibilities, and overcome the gaps by providing relevant training courses accordingly. Knowledge gained from training could be passed onto customers through Sales & Marketing staff and/or Product Steward. Feedback from employees can be sought during training programs.

Example No. 2
Product Steward team meets as needed with other departments, such as EHS&S, R&D, Sales, Marketing and Distribution staff as a means to obtain and relay workers feedback. Maintain awareness and understanding of what all the job functions are doing to meet product stewardship goals through such meetings. Use these meetings as an opportunity to educate staff on products, to determine further needs and to keep them informed about customer feedback.

1.2 Self-assessment
• Are competency gaps measured for each worker affecting the performance of Product Stewardship program?
• Are workers receiving training relevant to their identified competency gaps (training plans)?
• Are key personnel trained in the overall product risk management system?
• Do routine awareness and training programs for all products and processes include handling, recycling and disposal of products and product wastes?
• Are training effectiveness measured to ensure competency gaps reduced or eliminated?
• Does a feedback mechanism exist within the company for reporting new uses, misuses, adverse effects and other Product Stewardship concerns?
• Did the organization train some workers to be competent in internal auditing, if the organization decided to assign this roll to some workers?
• Are training records maintained?

ST-8: Value Chain Communication, Cooperation and Outreach

Processes to work with suppliers, customers and other value chain participants to foster product safety management and information exchange along the value chain, commensurate with risk.

1.0 Guidance
Processes shall be in place to communicate, receive and evaluate product stewardship information from value chain participants; customers, suppliers, contract manufacturers, carriers, distributors, contractors and third-party logistics providers. Reviews must be based on Responsible Care or other health, safety, security and environmental performance criteria. If improper practices involving a product are discovered, corrective measures are taken based upon a company's independent judgment, ranging from resolving the improper practices to termination of business relationships, if necessary.

1.1 Suggested Activities / Examples
Example No. 1
Product Stewardship team participates in the selection process of potential contract manufacturers

and distributors by reviewing health, safety, security and environmental practices related to their services, and evaluate the results and influence the selection process. Provide health, safety and environmental related information of product(s) as well as technical assistance and expertise on EHS&S matters. Companies may have an existing procedures for the selection of on-site contractors and distributors that could be modified as required. Have Standard Operating Procedures (SOP) for managing customer compliance concerns and audits of production facilities.

Example No. 2
Develop a system with EHS&S, marketing and sales staff for tracking customer input about emerging trends or potential product problems. Assign technical staff to assist customers when problems arise with the company's product. Develop formal procedures that address the mechanical aspects and analytic procedures required to make a product recall decision by collecting and reviewing customers' complaints and conducting internal product evaluation.

Example No. 3
Educate customers and other direct product recipients about product stewardship and what it means to them. Have sales personnel inform and share regulations concerning products and provide the information necessary to customers to ensure their products comply with legislative requirements. Establish a channel of communication with customers to maintain an ongoing relationship to determine their needs for supplemental safety information or expertise and promote the sharing of EHS&S knowledge. Develop a system to ensure that the customers are able to implement appropriate safety measures.

Example No. 4
Conduct periodic reviews of current contract manufacturers on their health, safety, security and environmental capabilities and performance through site visits of the contract manufacturers' facilities and/or surveys as well as to review procedures and ensure adherence to health, safety, security and environmental standards related to the contracted service(s) that shall be included as a requirement in contracts with manufacturers. Such reviews can also help in the (re)selection of contract manufacturers and to improve their performance, as well as the achievement of appropriate health, safety, security and environmental standards.

Example No. 5
Distributors are held to the same standards as for Product Stewardship responsibility and product compliance. Develop a procedure for informing distributors about the Product Stewardship Code and how your company is implementing the code. Develop a mechanism to identify who is to receive which information and how often, who disseminates information, who is to prepare and review product communications and how often they are to be updated. Establish regular communication with distributors to assess customer satisfaction and/or problems with products. Establish a mechanism to identify useful information on common uses and potential misuses of products by distributors.

1.2 Self-assessment
- Are background knowledge, facilities and procedures of customers, distributors, and contractors assessed based on the risk of the business before entering into an agreement with them and continue their assessment on ongoing bases, in order to confirm their preparedness to apply proper emphasis on EHS&S issues involving company products?
- Is there a feedback mechanism in place for addressing concerns of customers, distributors,

and contractors?

- Are sales and marketing personnel actively involved in discussions and training to become familiar with emergency procedures and response plans, particularly those targeting their higher risk products? Do they regularly inspect, review and report on implementation of Product Stewardship requirements?

- Are customers encouraged to implement proper practices for the handling, use, recycling and disposal of company products consistent with the outcome of the assessment?

- Do Emergency Response Plans define clear roles and responsibilities for those involved in the Product Stewardship process, particularly for incidents during distribution, off-site storage and at customer premises?

- Are Emergency Response Plans reviewed and updated on a regular basis to take account of any changes at any stage in the Product Stewardship process?

ST-9: Information Sharing

Make companies' Product Safety and Stewardship information publicly available.

1.0 Guidance

The objective of information sharing is to enhance public knowledge and confidence in the safe use of chemical products, while protecting confidential business information. Publicly available information includes relevant health and environmental effects and safety management measures to promote safe handling and use of products throughout their lifecycle.

1.1 Suggested Activities / Examples
Example No. 1

Communicate product risk information to distributers and customers and other direct product receivers through practical types of awareness and training, provision of Safety Data Sheets, product labels etc.

Ask customers and distributors about their needs for additional information and guidance on proper product use or handling, e.g., their uncertainties of disposal methods or their safety expertise, etc. Train staff on appropriate responses to challenges from customers and the public.

Gather feedback from concerned workers and prepare effective communication materials in the form of videos, circulars, memos, articles in company's internal newsletter, bulletin boards etc. to be disseminated to all concerned parties. Workers who are aware of public's or external organizations' perception of product should also channel their feedback through the system.

1.2 Self-assessment
- Does a process exist to make companies' Product Stewardship information publicly available?
- Are information required by distributers and customers continually evaluated and actions taken to assure effective information sharing?
- Does a system exist to investigate and verify level of supplier's compliance to the information sharing process, measure effectiveness of knowledge transfer and take actions accordingly to continually improve the system?

ST-10: Performance Assessment and Continual Improvement

Routine monitoring and assessment of product stewardship program's aspects, with processes in place to drive continual performance improvement and implement corrective actions when needed.

1.3 Guidance

Organizations implement internal processes to monitor and assess product stewardship performance, utilizing appropriate indicators. Companies report their activities associated with implementation of this Code to GPCA to facilitate public understanding of the industry's overall product safety commitment and performance.

1.4 Suggested Activities / Examples

Example No. 1

Product Stewardship expectations stated in the policy translated into specific overall SMART objectives for each significant area (Life Cycle Stages). Identify measurable KPIs with a clear targets and thresholds, to be monitored effectively through a suitable toll or methodology such as Balanced Score Cards (BSC), where each KPI is clearly assigned to a process owner (manager or team leader..etc). Each KPI shall have a suitable review frequency depending on the nature of the process and KPI (Monthly, Quarterly, Annually). Some organizations have different Level of BSC (Corporate, Sector, department..etc) where all BSCs are aligned with the corporate BSC. Incentives should be effectively linked to KPIs and Objectives.

Strategic map may be used to demonstrate relations and alignments between KPIs, and to illustrates to which perspective each KPI belongs (Financial, Customers & Stakeholders, Internal Perspective, Competency..etc)

1.0 Self-assessment

- • Are Product Stewardship expectations translated into specific overall SMART objectives for each significant area (Life Cycle Stages)?
- Are Product Stewardship KPIs identified and monitored at a defined suitable frequency for each process within the life cycle of the products?
- Is each KPI measurable and has targets and thresholds?
- Are actions triggered whenever targets are not achieved or limits breached?
- Are actions' progress monitored until completed & results re-measured and goals achieved?
- Are regular reports and other means of progress monitoring of the Product Stewardship plan and evaluation of compliance obligations generated and reviewed at frequencies appropriate to the product risk and need for continual improvement?
- Is an internal audit program established? Are all processes and Product Stewardship aspects covered at frequency appropriate for the risks identified and classified as high or significant?
- Is a corrective/preventive action process established to effectively rectify system's non conformities with the Product Stewardship program?
- Is a team or a committee formed to foster the product stewardship actions, follow up on actions, aims to synchronize and align all Product Stewardship processes together?
- Do senior management regularly review key Product Stewardship activities and key company Product Stewardship goals, progress and performance, and review relevant legal and other obligations & workers EHS&S concerns, and initiate actions and provide resources accordingly (management review)?

CHAPTER THREE

References:
- GPCA-RC-C03, Issue 15-06-2011.
- Implementation Guide for Responsible Care® Product Stewardship Code of Management Practices; American Chemistry Council.
- American Chemistry Council ACC RC 14001® 2015 TITLE: RESPONSIBLE CARE MANAGEMENT SYSTEM® TECHNICAL SPECIFICATION
- American Chemistry Council RCMS®: 2013