Coatings Care® Framework

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IPPIC is a voluntary, nonprofit trade association working to advance the needs of the paint and coatings industry and the professionals who work in it. The organization represents paint and printing ink manufacturer trade associations from around the world. IPPIC serves as an advocate and ally for members on legislative, regulatory and judicial issues, and provides forums for the advancement and promotion of the industry.

Introduction

The coatings industry, encompassing paints and printing inks, has long recognized the importance of protecting employee and consumer health and safety, and the environment. The work practices used, the products developed and manufactured, and the support provided to employees, customers and the community stand as examples of a tradition of commitment and concern.

The technological advances achieved by the industry over the past 50 years have resulted in a wide variety of durable, highly visible and long-lasting products, which meet the customer's demand for safety, reliability, and environmental protection. Coatings manufacturers also emphasize environmental protection in new product development, seeking technologies that offer improved product performance along with safety and reduced environmental impact. Thus, awareness of health, safety and environmental requirements has become an integral part of doing business.

As new technologies and product applications emerge in the marketplace, the industry must adapt and respond quickly to effectively support its customers. Regardless of size or product specialty, all companies must effectively integrate compliance with health, safety and environmental requirements, while at the same time, implement sound business strategies that will provide for expansion and market growth. Building on this fact, Coatings Care® is a resource that can be used to help manage health, safety and environmental responsibilities and improve organizational capabilities to provide products that can be made, used and disposed of safely.

Coatings Care is a practical path to a sustainable development program. Coatings Care provides critical components of sustainability, taking appropriate responsibility for supplying quality products in a sustainable way that meet the customers' performance requirements and that can be used safely without unduly harming the environment. Accordingly, the program can serve to address emerging sustainability efforts, in particular with respect to the environmental aspects, and offers a practical basis for ensuring products that extend sustainability values to users of coatings products, by increasing their useful life.

As part of the coatings industry's ongoing commitment to effective health, safety and environmental practices, the Coatings Care® resources offer the means to:

- More effectively use organizational and management resources for compliance with health, safety and environmental regulations;
- Integrate consideration of health, safety and environmental resource information in organizational planning and operations;
- Access health, safety and environmental management practices and resources being used or considered on an international basis.

Coatings Care® can best be described by detailing how it supports the industry's efforts to manage its health, safety and environmental responsibilities. To this end, Coatings Care® anticipates opportunities for:

- Expanding participation in developing health, safety and environmental standards which will govern the industry;
- Operating with a uniform health, safety and environmental policy statement;
- Aligning operations with management practices identified or developed by the industry;
- Developing community outreach efforts to support public involvement; and

- Identifying and evaluating areas for improvement.

In today's marketplace, diverse and often conflicting requirements for protecting worker health, safety and the environment may lead companies to pursue unfocused and overlapping management strategies. The resources contained in Coatings Care® allow companies to address their health, safety and environmental responsibilities through a consistent set of management practices. Coatings Care® resources may also be applied on an international basis throughout the global marketplace.

An additional feature of Coatings Care® is that it is supportive and complementary to the Responsible Care® program of the chemical industry.

Management Resources

Whether measured in terms of expanded or shared resources, improved communications, or enhanced industry performance with respect to health, safety and environmental measures — evaluating and utilizing Coatings Care® resources can be an integral part of a company's health safety and environmental initiatives.

Companies are encouraged to consider ways to utilize the Coatings Care® resources. Successful consideration of and adoption of specific resources offered on the management practices identified in Coatings Care® can be accomplished in a number of ways:

- By acknowledging the benefits of managing health, safety and environmental responsibilities in a manner consistent with the Coatings Care® policy statement
- By participating in Responsible Care® or Responsible Distribution®
- By determining, after careful review and assessment, that because of the nature of your business Coatings Care® resources are not applicable

Coatings Care® was developed to reflect and assist the coatings industry's commitment to individual and collective efforts that promote sound health, safety and environmental practices. Accordingly, the association's health, safety and environmental management resources will continue to be developed to serve the industry's needs. Individual company consideration and utilization of these management resources is strongly encouraged.

Policy Statement

In order to advance the coatings industry's management of health, safety and environmental responsibilities, the resources provided under Coatings Care® seek to:

- Promote efforts to protect employees, customers, and the public and the environment;
- Provide relevant information on the safe use and disposal of industry products to customers, and make such information available to the public on request;
- Make protection of health, safety, and the environment an early and integral part of the organizational planning process;
- Comply with all legal requirements which affect operations and products; and
- Be responsive to community concerns;
- Assist governments in the development of equitable and attainable standards.

Self-Evaluation

Undertaking an organized "self-evaluation" is strongly advised for companies considering the Coatings Care® management practices and related management resources. Nearly every code of management practice has a series of "suggested activities" that may be used to assess current operations and identify areas for future action (and where specific guidance is not offered sufficient descriptive information is provide to allow for the development of applicable self-assessment criteria). Participants are encouraged to use these "suggested activities" to support the undertaking of a "self-evaluation" in a manner appropriate for their operations. Levels of evaluation to be considered include:

I.   Awareness Level — General knowledge of management practice, but no formal efforts to address it have been undertaken yet.
II.   Developmental Level — Current approach being evaluated to determine consistency with management practice.
III. Operational Level — Current efforts align closely with the management practice.
IV.   Re-evaluating Level — Operational program is routinely re-evaluated to identify possible improvements.
N/A   Not Applicable — Management practice not relevant to current operations.

Using the resources provided in this Framework document, companies are encouraged to:

- Determine the current "Level" of their own performance by using "Self-Evaluation" resources
- Determine where performance improvements can be made
- Outline and implement plans to make possible improvements
- Confirm progress and re-evaluate periodically

Codes of Management Practices

Coatings Care® has established resources aligned with Codes of Management Practices in five critical areas of health, safety and environmental responsibility:

Product Stewardship
- Product Development
- Health, Safety and Environmental Education and Information
- Product Safety (Product Use)

Manufacturing Management
- Occupational Safety and Health
- Operations (Process Safety)
- Environmental Management (Pollution Prevention/Waste Management)

Transportation and Distribution
- Training
- Risk Management
- Carrier Performance
- Distributors
- Emergency Response

Community Responsibility
- Emergency Response
- Employee Education and Training
- Community Liaison
- Social Accountability (Optional)

Security (Optional)
- Developing Security Charter
- Security Awareness Policy
- Threat Analysis
- Information Security Guideline/Standard

For each area of responsibility, Coatings Care® defines specific management practices that address appropriate health, safety and environmental considerations and provides guidance resources that can assist in making necessary improvements. In addition to defining these management practices, Coatings Care® assists in undertaking self-evaluations to identify possible areas for progressive improvement in guide individual company efforts.

Product Stewardship
Code Overview

I.   Purpose

The Product Stewardship Code under Coatings Care® seeks to establish health, safety and environmental (HSE) considerations as an early and integral part of product formulation and to communicate appropriate safeguards for product use and disposal to customers. To accomplish this, product stewardship must be viewed as a shared responsibility and therefore understood by all those responsible for product formulation, manufacturing, marketing and customer support.

Product stewardship principles apply for all classes of industry products, and acknowledge the need for quality products which can be used and disposed of safely. In the workplace, product stewardship efforts support the employer's responsibility for providing a safe workplace and addressing environmental considerations arising from product use and disposal.

Given the diversity of the coatings industry, the Product Stewardship Code is intended to reflect good management practices applicable to all members of the supply chain, and integrate practical and flexible considerations.

II.   Management Practices

PRODUCT DEVELOPMENT

HEALTH, SAFETY & ENVIRONMENTAL RISKS (1.1)

> **Develop procedures to identify and reduce potential health, safety and environmental risks associated with new and existing products; evaluate risks and implement or communicate appropriate control practices for safe use and disposal**
>
> It is the responsibility of the manufacturer to systematically gather, interpret and act on information regarding potential health, safety and environmental risks that may be posed by new or existing products. Typical sources of such information would include Safety Data Sheets (SDSs) from raw material suppliers, publicly available health and safety databases, government regulations, and internal company databases, logs of customer communications. When insufficient information exists, the manufacturer might consider generating information by such means as product safety/toxicity testing, environmental fate studies, or exposure assessments.
>
> Review and assessment of this information is most effectively accomplished by employees who are equipped by training and experience to appreciate its significance, arrive at sound risk characterizations, and develop effective risk management strategies. Examples of effective risk management strategies would include label and SDS warnings, personal protective equipment recommendations, and disposal instructions. In some cases the risk management strategy may include reformulation of the product to use less toxic components, or restricting distribution to markets where industrial hygiene practices are known to be adequate.
>
> The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:
>
> > *AWARENESS*
> > - Review all of the relevant regulatory requirements and guidance documents for hazard/risk assessment.

- Identify site or facility personnel who obtain and maintain health safety and environmental (HSE) information on raw materials and develop an understanding of existing facility practices.
- Review the Product Stewardship Code with research and development, and customer service personnel.

DEVELOPMENTAL
- Identify internal and external hazard communication and customer service opportunities.
- Develop plans to integrate HSE information and product use/exposure considerations in new product development.
- Initiate a "pilot project" to apply product stewardship principles to development of a particular product and evaluate the effectiveness of the effort.

OPERATIONAL
- Procedures are written and implemented for evaluating potential health, safety and environmental risks associated with new and existing products including:
  - Hazard assessment (toxicity of raw materials)
  - Exposure assessment (including estimation methods)
  - Potential environmental impacts, including potential air emissions, consequences of accidental spills or leaks, and waste management considerations.
- Employees with assignments involving customer contact are trained on the product stewardship requirements and provide customer feedback for risk management.
- Practices and procedures provide customers (consumers and professional users) with appropriate information to use and dispose of product safely.

RE-EVALUATING
- Direct communication links established with suppliers for up-to-date HSE information and interpretative guidance on appropriate risk management practices.
- Facility practices undergo independent evaluation by peer review, qualified consultant, or certification program.
- HSE staff trained on risk assessment; and management practices used as a resource by research and development personnel.
- Practice integrates emerging information on risk assessment/risk management techniques from partnership efforts with regulatory agencies, customers and raw material suppliers.

DESIGN INTEGRATION (1.2)

Integrate health, safety and environmental considerations into the design, development and improvement of products and processes, including a commitment to conserve, where possible, natural resources and energy

The manufacturer should have management systems in place to assure that health, safety, and environmental (HSE) considerations are reviewed as products move through the development process. These considerations should be given equal weight to such factors as product performance, cost, market acceptability, etc., in new product release decisions.

In conducting this assessment, the manufacturer may want to consider such tools as life cycle assessment (LCA). Factors to be considered may include not only those HSE considerations associated with product manufacture and use, but also such factors as packaging waste, energy consumption, the sustainable use of renewable and non-renewable resources, recycling and reuse opportunities.

New products should not be launched until a determination is made that it is possible to make, use, handle, distribute, recycle, reuse and dispose of the product safely and in an environmentally sound manner.

Wherever possible use of hazardous ingredients should be carefully evaluated and efforts made to select alternatives where possible.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Read all chemical control regulations applicable to product formulation and raw material usage.
- Review available guidelines on risk assessment practices for formulators.
- Identify existing product development and process modification procedures.

DEVELOPMENTAL
- Review health, safety and environmental activities (critical to managing product risks) with formulators, research and development or process design personnel; activities include hazard communication, raw material supplier information, exposure estimation methods, available HSE control strategies, and other considerations.
- Identify personnel critical to product design and/or formulation and review product stewardship principles.
- Select an existing product formulation and ask product development personnel to identify potential hazards and suggest available control strategies (including, where feasible, a comparative assessment of the hazards associated with a reformulated product).
- Review information on life-cycle assessments to identify natural resource, energy conservation and waste and emissions minimization considerations and quantify associated costs.

OPERATIONAL
- Document risk assessment procedures for formulation activities and process modification/improvements.
- Product design teams established to implement procedures and practices for new formulations or manufacturing processes.
- Clear links established to raw material suppliers providing information critical to design of new and/or improved products.
- Product life-cycle assessments are performed and are taken into account in design, development and improvement of products and processes.

RE-EVALUATING
- Product design team interacts with customers to plan for new products and/or processes.
- Joint training programs held for product design team and HSE personnel in order to support focus on new developments/technology for risk assessment.
- Facility program subject to peer review through use of qualified consultant or certification program.
- Integrate appropriate emerging techniques on product life-cycle assessments.

RESPONSE TO CUSTOMERS AND FIELD PERSONNEL (1.3)

Establish procedures to address information received from customers and field personnel. Such information should be evaluated and used in product development efforts

The manufacturer should provide adequate training on product stewardship to employees with responsibility for customer contact, and also provide these employees with access to resources needed to respond to customers.

Moreover, there should be a defined communication system in place to ensure information received from the customer is passed on to others within the manufacturer's organization with the training and experience to evaluate its broader significance. Immediate review of this information needs to be considered for regulatory and product safety consideration. This information should be compiled and retained to help guide ongoing company product stewardship efforts, such as product development, customer outreach, and business plans for existing products.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Identify field/customer service personnel with the background and training to facilitate implementation.
- Review product stewardship considerations with management and integrate relevant considerations into business plans for new products and processes.
- Evaluate existing customer inquiry and other product records (quality control/quality assurance) for information resources that may be useful in implementing the management practice.

DEVELOPMENTAL
- Develop plans for coordinated and consistent response to customer inquiry and field information requests, including those for health, safety and environmental (HSE) information on products.
- Review plans for customer inquiry and field information response with management and obtain support, including allocation of required resources for implementation.
- Initiate a pilot project to increase effectiveness of customer support and field information and response, including listening and observation skills.

OPERATIONAL
- Plans and procedures written for customer service /field personnel to respond to inquiries and requests for support.
- Key personnel assigned to undertake customer outreach efforts, support internal communication of customer inquiry and field information requests, and initiate follow-up assessment of response efforts. Key personnel are trained and familiar with the Product Stewardship Code.
- Product design team periodically meets with key customer outreach and field personnel to review new information.

RE-EVALUATING
- Detailed analysis of customer inquiry and field information integrated in business plans for existing product lines.
- Customer outreach efforts showcased in company promotional literature to demonstrate value and commitment.
- Customers solicited to provide independent assessment of outreach effort, including company response. Results should be integrated into new product development and planning.

CONTRACTOR SELECTION (1.4)

Select and use contract manufacturers who follow appropriate health, safety and environmental control practices

The selection of contract manufacturers should be performed in accordance with the current accepted standards within the company. Contract manufacturers include toll, custom converter, and private label. The contract manufacturer should be held to the same or similar standards as the company is held for its own operations. It is advisable to require a safety/environmental review prior to operation or a certification that

the contract manufacturer adheres to the same standards that the company does. These standards may include following Coatings Care® or some other similar resources.

It is important to develop principles defining acceptable health, safety and environmental performance for contractors, and these principles should be communicated to current and prospective contractors as a condition of doing business with the manufacturer. For contractor relationships that require greater scrutiny, practices at the contractor's site should be reviewed by the manufacturer to assure they are in conformity with these principles. In some instances, joint training programs with the contractor may be required to ensure that an adequate standard of performance is met.

In addition to the initial evaluation of contractor practices versus these standards, the manufacturer may consider periodic reviews of the contractor's facilities, third party certification of contractor performance, or other measures that would provide objective metrics of contractor HSE performance.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Identify existing contract manufacturers.
- Information on health, safety and environmental (HSE) practices reviewed and summarized for communication to contract manufacturers.
- Management considerations leading to contract manufacturing known and understood by facility personnel.

DEVELOPMENTAL
- Product stewardship principles and facility HSE practices reviewed with contract manufacturers.
- Contract manufacturers advised of development of selection criteria for HSE practices.
- Pilot project initiated to evaluate applicability of HSE practices to contract manufacturers.

OPERATIONAL
- Current contractors provide evidence of conformance with required HSE control practices.
- Selection criteria for new contract manufacturers incorporates requirement for HSE control practices.
- Periodic site visits undertaken by HSE and/or procurement personnel determine conformity with contract obligations, including HSE control requirements.

RE-EVALUATING
- Joint training of contract manufacturing and facility personnel supports understanding and implementation of HSE control program requirements.
- Independent assessment of contract manufacturing operations done by qualified consultants, or through independent certification.
- Customer feedback on contract manufacturers' products reviewed and evaluated, with relevant considerations used in future production planning.

HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION/INFORMATION

HEALTH, SAFETY AND ENVIRONMENTAL (HSE) INFORMATION FOR CUSTOMERS (2.1)

Develop and distribute product labels and Safety Data Sheets (SDSs) which convey appropriate hazard warnings as well as conditions for safe use and disposal

Manufacturers, as the creator of products, are, in many cases, the most knowledgeable resource about a product's characteristics. As such, the responsibility to inform and warn users about the health, safety, and

environmental implications of its products, whether they are experimental products or isolated intermediates, falls logically upon the shoulders of the manufacturer. This responsibility is defined by laws and regulations along with everyday business practices. This section seeks to provide some background and explanation of this management practice along with suggested activities for utilizing the identified resources that can help improve management of responsibilities.

There are many methods of communicating information to internal and external users. Some methods are required by law in the form of labels or SDS while other data are not mandated but have been developed by the manufacturer/industry in order to update technical information.

Other methods include but are not limited to:

- product (or technical) data sheets;
- additional informational pamphlets;
- electronic bulletins or correspondence;
- technical assistance documents and communications; and
- training seminars.

Special attention must be given to any change in the process, which includes changes to equipment, the formula, the software programming or the use of new raw materials. These types of fundamental changes, even if they are subtle in nature, could have a dramatic consequences and it is vitally important that significant changes or updates be promptly communicated to customers. An effective "management of change" policy could be very beneficial.

A manufacturer with a commitment to product stewardship strives to adequately and properly distribute appropriate health, safety and environmental information regarding its products in a timely fashion. This effort seeks to ensure that the customer has appropriate information on the proper product use, handling, and disposal readily available. A manufacturer utilizing Coatings Care® resources will look at not only the required regulatory information but will consider other relevant data as well.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review relevant regulations and guidelines on the preparation of product labels and SDSs.
- Review of relevant national and international standards for SDS as well as customer-specific requirements.
- Review available coatings industry labeling guides, emphasizing descriptions of representative industry practices and local regulations.

DEVELOPMENTAL
- Internal personnel assignments for labeling and SDS development made along with commitment to initiate appropriate level of employee training on health, safety and environmental (HSE) practices.
- Review company labels and SDS for conformance with regulatory requirements.
- Co-ordinate with raw material suppliers to evaluate HSE information used in the preparation of labels and SDS.

OPERATIONAL
- Written procedures developed and implemented for the preparation of labels and SDS.
- Individuals assigned to labeling and SDS development are trained and educated on industry practice and aware of resource materials for resolving development questions.

- Management support for function responsible for labeling and preparation of SDS emphasizes the need to develop appropriate hazard warnings.

RE-EVALUATING
- Labeling and SDS preparation integrated at an early stage of new product development.
- Increased development and use of data on product hazards integrated into label and SDS preparation.
- Product labels and SDS appropriately conform to international standards and SDS available in electronically transmitted form.

SUPPLIER HEALTH, SAFETY AND ENVIRONMENTAL (HSE) INFORMATION (2.2)

Require suppliers to provide appropriate health, safety, and environmental information on their products

Since companies must consider the health, safety and environmental risks for all components of a product, companies need to ensure that suppliers provide adequate health, safety and environmental information for their products, whether "hazardous" or not. Suppliers include raw material manufacturers, distributors of raw materials, and all types of contract manufacturers. The resources for this management practice offers several tools designed to help companies monitor the health, safety and environmental data relevant to their products. These tools include a questionnaire for the suppliers of critical chemicals; a coatings and resins raw materials information request; and information requests designed for the suppliers of hard goods and the suppliers of raw materials.

A commitment to product stewardship includes a commitment to institute methods or systems to ensure that the supplier's information is adequate as a basis for creating product labels and Safety Data Sheets (SDS). There should also be procedures and tools similar to those listed above to ensure that the supplier continues to update the information as new data is developed. The resources also provide the user with a general awareness of this management practice as well as information that can assist in managing responsibilities.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review the existence of relevant requirements on provision of HSE information by suppliers.
- Co-ordinate with facility raw material procurement personnel to obtain a listing of current suppliers and develop an understanding of internal procedures for receiving and distributing health, safety and environmental (HSE) information from suppliers.
- Review with management the need to obtain supplier commitments to support HSE practices with appropriate information.

DEVELOPMENTAL
- Communicate with identified suppliers and reinforce the need for clear, concise HSE information and identify contacts for additional information requests.
- Assign key staff responsibility for the receiving and distributing information from suppliers to product development and HSE personnel.
- Develop a pilot program to evaluate supplier HSE data for use in preparation of (Material) Safety Data Sheet and labels in conformance with site policies and procedures.

OPERATIONAL
- Written procedures developed and implemented for informing facility suppliers of their obligation to provide necessary information to support HSE practices and procedures.

- Quality of HSE data received continuously reviewed by assigned staff and deficiencies resolved with supplier contacts.
- Raw material procurement procedures integrate review of information before new materials are used on-site.

RE-EVALUATING
- Facility integrates delivery and management of HSE information from suppliers using electronic format.
- Detailed independent assessment of chemical-specific HSE information on raw materials undertaken to assess quality and support risk assessment/management activities.

HSE SUPPORT OF DISTRIBUTORS (2.3)

Support distributor efforts to fulfill their responsibilities for transmitting health, safety and environmental information

Manufacturers and suppliers have an obligation to ensure that end-users and distributors receive accurate health, safety, and environmental information in a timely fashion. A commitment to product stewardship necessarily includes the establishment of a communication system to ensure that new or updated health, safety and environmental data is forwarded on request quickly and efficiently.

The manufacturer is in the best position to develop information and the manufacturer is responsible for making sure information is distributed. This can often be supplemented by establishing a program to enlist distributors to respond to customer inquiries. Additional resources offer ways to enhance the exchange of information, provide a general awareness of product stewardship, and the resources that can help advance management of responsibilities.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review any requirements regarding manufacturer and distributor responsibilities for developing and disseminating product labels and SDS with appropriate hazard warnings.
- Identify product distribution procedures and practices and determine opportunities for communication and co-ordination of activities.
- Review distribution obligations or support of product stewardship.
- Obtain management support for implementation, including provision of sufficient resources.

DEVELOPMENTAL
- Assign responsibility for distributor communication to key staff familiar with product stewardship principles and health, safety and environmental (HSE) information requirements.
- Train assigned staff on the facility's product distribution practices.
- Develop plans for enhanced distributor communications by initiating a pilot program targeted at several key distributors and seek to verify downstream communication of HSE information to customers and product users.

OPERATIONAL
- Facility procedures for developing HSE information reviewed with distributors.
- Distributors informed on product stewardship requirements and their role in supporting downstream communication of information.
- Key staff assigned to periodically evaluate distribution facilities and their customer locations to determine conformance with recommended HSE practices.

- Procedures written and implemented for obtaining feedback of relevant information on HSE concerns from distributor's customers.

- Auditing of distributors for conformance with HSE requirements undertaken by independent reviewer, with results reviewed by management and integrated in facility program.
- Staff assigned to distribution function assists in development of HSE information and materials to be offered through the distribution chain.

PRODUCT SAFETY/USE

CUSTOMER RELATIONS (3.1)

Establish appropriate working relationships with customers to foster the safe use, disposal, and where appropriate re-use/recycling of industry products and packaging

Paint and coatings companies have the responsibility to safe product handling, use, and disposal information on products to their customers. Manufacturers can address this responsibility by establishing appropriate working relationships with customers. A key feature of customer relationships is to develop a system to obtain feedback from customers to determine if the information they receive is sufficient to assure safe product handling, use, and disposal to include reuse and recycling of industrial products and packaging.

In the course of doing business, manufacturers are often faced with customer requests for information and support. It is important to monitor these requests to identify what safe-handling, use and disposal information is routinely communicated to customers, particularly information provided beyond what is normally included in SDS's and labels. The manufacturer should also determine what form such "additional" information takes, such as newsletters, bulletins, reports, etc., and how such information is conveyed to the customer (including direct personal visits, telephone contacts, various mailings, electronic media, or presentations at technical forums, trade shows or association meetings).

The manufacturer should consider identifying and training customer contact personnel to periodically discuss product stewardship issues with their customers. These customer contact personnel should be knowledgeable in safe handling, use, and disposal methods and proactively seek information from the customer about product-use experiences and concerns. Manufacturers may utilize existing relationships with customers and trade associations to enhance their ability to foster safe product use.

The manufacturer should consider a system to review the progress of customer contacts and other outreach activities. The system may include goals, measurements to assess frequency and effectiveness of customer interaction, and regular review of how information obtained from customers was utilized.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Develop an understanding of customer base for facility products and identify the industry, professional or service organizations which may represent customers or have established communication links to customers.
- Obtain information on current customer relationships, including direct technical support efforts for product use/application.
- Interview facility personnel assigned to customer service or field support to obtain available information on other potential direct customer-support opportunities, including involvement in customer community service activities.

- Obtain management support for program to enhance customer working relationships, including provision of sufficient resources.

DEVELOPMENTAL
- Begin planning for integrated practice to engage customers in constructive effort to support safe use and disposal of industry products.
- Assign key staff to co-ordinate development of enhanced working relationships.
- Involve all facility employees in identifying and assessing ways to establish enhanced working relationships with customers based on effective response to product safety needs or concerns (e.g. exposure assessment/control, product disposal, container recycling, labeling and (Material) Safety Data Sheet interpretation, etc.).

OPERATIONAL
- Written procedures established for engaging customers in support of safe use and disposal of industry products.
- Key staff assigned to regularly develop reports on progress of customer support effort to management, product development and health, safety and environmental (HSE) personnel.
- Annual goals set for customer support activities on product safety. Goals broadly communicated to employees, with facility performance results announced.

RE-EVALUATING
- Joint projects with customers or customer-affiliated organizations highlighted in publications, conferences, or meetings/seminars.
- Results of customer outreach efforts integrated into planning for new products or processes.

CUSTOMER TRAINING & FEEDBACK (3.2)

Support customer efforts to increase understanding of potential product safety hazards, including, where appropriate, the provision for specific training on product use and associated regulatory requirements

Manufacturers are often required by law to communicate safe handling and disposal information on industry products. The principle requirements for communicating such information are likely to be spelled out in industrial and consumer product safety legislation and regulations. Additional information on safe use and disposal is developed and communicated to customers based on an individual company's assessment of hazards associated with the use of its products.

The development of information on products, whether to address regulatory requirements or specific concerns identified by your company, must be done consistently and in accordance with responsible product stewardship guidelines. In addition, safe handling and disposal information should be periodically reviewed and updated to maintain its utility to customers. Company personnel responsible for developing this information should be knowledgeable on proper engineering and controls for coating application operations (e.g., booth ventilation, application equipment/procedures and personal protective equipment) so that they can be a resource to customers seeking to reduce exposure and attendant risks.

Care should be taken to respect the customer's organizational structure and channels of communication when providing HSE information or responding to specific questions. Oftentimes it is necessary to follow-up after the initial response to information requests to make certain that it has made its way to the right individual. If a coating manufacturer learns of end-uses or conditions of use which were not intended during product development, customers should be advised of these concerns and/or provided additional information, if available, or alternative products that may allow them to handle such end uses or conditions safely and effectively. Document any concerns arising from customers' use of company products.

Appropriate mechanisms for communicating product stewardship information could include, but are not limited to:

- Training sessions at the customers' site, at designated centers or at local trade schools;
- Periodic review of product application and product safety information by salesmen, technical resource personnel or others
- Referrals to permitted waste disposal service providers;
- Attendance at industry-sponsored seminars, certification programs
- Participation in customer quality management programs;
- Distribution of detailed technical literature, manuals, product data sheets, etc.

Coatings Care® participants are encouraged to explore these and other feasible ways to support customer efforts to safely use and dispose of industry products.

AWARENESS
- Review regulations pertaining to customer requests for product safety information.
- Develop a clear understanding of customer base for facility products.
- Management acknowledges the need to respond to customer inquiries on product safety matters with clear concise information.

DEVELOPMENTAL
- All facility products identified and categorized by end use, consumer market, or other appropriate method.
- Key staff assigned to customer support and trained on product health, safety and environmental (HSE) information and the requirements of the Product Stewardship Code.
- Pilot program developed and implemented seeking to enhance customer communication contacts.

OPERATIONAL
- Procedures written and implemented to respond to customer inquiries and provide constructive information to support safe use and disposal of industry products.
- Key staff assigned to customer support regularly review HSE information and develop additional content in response to knowledge of the customer base and potential questions.
- Customer inquiries on HSE information and product safety reviewed with facility management, product development and HSE personnel to provide a basis for enhanced product stewardship activities.

RE-EVALUATING
- Data on customer inquiries reviewed and integrated in long-range planning for new product and processes.
- Customer outreach showcased by participation in industry-sponsored seminars or award programs.
- Independent assessment of customer support efforts performed by qualified consultant or evidenced through certification under accepted standard.

UNDERSTANDING & CONTROL OF HSE HAZARDS - CURRENT AND FUTURE (3.3)

Obtain and maintain information on health, safety and environmental hazards and exposures arising from the legitimate use and reasonable foreseeable misuse of new and existing products

Fundamental to any product stewardship program in this industry is a systematic approach to the preparation and distribution of Safety Data Sheets (SDSs) as well as hazard and precautionary labels. For each product a

SDS and label which comply with legislative and regulatory requirements should be prepared. To do this the preparer should be fully aware of all ingredients used in the formulation and should gather, read and understand all related information provided by the raw material suppliers, by governmental agencies, and by the experiences of internal development personnel and product users. Another source of product related information may be published articles in scientific journals or in the trade press. In addition, the manufacturer should be aware of and use label and SDS preparation guidance provided by appropriate trade associations. The manufacturer should also maintain awareness and practical knowledge of applicable national, state, local and international (where appropriate) regulations concerning the distribution, use, and disposal of the coatings products. Reasonable efforts should be made to assure that up-to-date SDS and label information for formulated products is made available to the persons who are actually applying the formulated coating products.

To the degree feasible, industrial hygiene (occupational exposure) data and relevant toxicological data should be developed and/or collected and reviewed to provide a basis for developing engineering controls and selecting personal protective equipment applicable to typical application scenarios.

The coatings manufacturer should identify and assess information on the nature and extent of potential product exposures, including reasonably foreseeable misuse, and document such information in an appropriate system. The system should also allow for input on information about actual exposures reported by customers. This information can be used to help assess the suitability of work practices and personal protective equipment recommendations, as well as the need for new or reformulated products with improved environmental, health, and safety characteristics.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review available information from government agencies on coatings-related occupational exposures and exposure assessment/estimation techniques.
- Develop an understanding of product uses and potential health, safety or environmental impacts arising from uncontrolled exposures.
- Review the requirements of the management practice with facility management to obtain support for program implementation, including commitment of sufficient resources.

DEVELOPMENTAL
- Develop information on integrated risk assessment/exposure modelling techniques useful for product development considerations.
- Establish recordkeeping practices conforming to local safety and health administration standards and medical recordkeeping requirements for supplier health, safety and environmental (HSE) information including product data sheets, (Material) Safety Data Sheets and raw materials labels.
- Maintain information on raw materials subject to restricted use or import/export controls.
- Assign key staff responsibilities for maintaining facility information.

OPERATIONAL
- Written procedures developed and implemented for maintaining HSE exposure information.
- Key staff assigned to information function trained on recordkeeping requirements as well as facility procedures.
- Procedures in place for feedback and use of information on potential product exposures from customer contact and/or field personnel.

RE-EVALUATING
- Customer-derived information on product safety integrated in planning for new products and processes.

- Independent assessment of information derived from product use scenarios used to support improvements in product safety. Independent assessments derived from participation in industry-sponsored forum sessions, through independent consultants, or certification under accepted standards.

SALES TO PROFESSIONALS (3.4)

Establish procedures to ensure that where required by law, products are sold or provided only to professional users

Distribution of some coatings intermediates or formulated coatings to customers may be restricted to professional or other specified users groups because of regulations. These regulations may specify, for example, that products can be used only with certain engineering controls or protective equipment, cannot be exported, or could result in a violation of volatile organic compound (VOC) permit limits. Other requirements describe conditions under which the product can be used in compliance with authority guidelines for food, drugs and explosives. On most domestically-sold products, there is no legal restriction on selling to non-professionals, but consumer use of certain products is strongly discouraged because of the strict precautions which must be adhered to when used.

It is appropriate for industrial coatings manufacturers and distributors to set procedures by which sales are to be channeled, including ways in which non-professional use can be discouraged. Awareness of federal, state, and local regulations that impact the distribution of restricted products is essential. These products must be identified, and the customers who use them should be well-informed. Manufacturers can establish systems to ensure that only qualified customers can order and be shipped such products.

Though this management practice focuses on legal requirements, the following suggested activities can be applicable to products which have no legal restrictions. A good product stewardship program should discourage consumer use of industrial products which require specialized controls and personal protective equipment for safe use.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review chemical control regulations and company policy which may limit use of coatings industry products (or raw materials contained in products) to professional users.
- Develop a clear understanding of how sale and use control regulations apply to facility products.

DEVELOPMENTAL
- Distribution of products subject to restricted use are assigned to key staff with broad responsibility to act appropriately to comply with regulatory requirements.
- Current customer base for restricted use products reviewed for conformance with regulatory requirements.
- Management support for restricted use acknowledged.

OPERATIONAL
- Written company policy regarding distribution of restricted use products is implemented and assigned to key staff.
- Product development staff periodically briefed on new developments in product and/or raw material use restrictions.

RE-EVALUATING
- Advanced notice of regulatory intent to restrict use of products and/or raw materials integrated in planning for new products or processes.

- Advocacy efforts to address industry concerns regarding regulatory restrictions offer evidence of success of product stewardship programs in reducing product risk.

PRODUCT RECALL AND RESPONSE TO SAFE USE COMPLAINTS (3.5)

Establish appropriate procedures for product safety complaints, batch traceability and product recall

As noted in Management Practice 1.3, Response to Customers and Field Personnel, manufacturers should have systems in place to ensure information received from customers is properly evaluated for its product safety implications. One rich source for this information is a product safety complaint. The manufacturer must ensure sales personnel or others with direct contact with customers are trained to pass on such complaints to the appropriate people in their organizations who possess the training, experience and responsibility for validating the legitimacy of the allegation dealing with the product stewardship implications of the information. These implications include possible regulatory or legal liability issues. At a minimum, such complaints should trigger investigation and feedback to the customer. Action beyond that may include revisions to hazard communication documents, product reformulation, upgraded customer training or customer site visits. Another possible outcome is a product recall.

To facilitate post-complaint trouble-shooting, it is important to be able to identify whether the complaints are confined to one or more batches of the product and if so, when and where they were manufactured. Some record, which could be as simple as a lot number stenciled on each container, should be made to enable the manufacturer to trace the origins of the batch in order to facilitate the needed investigation. Batch retention samples should also be kept to help determine if the defect was present upon batch completion or occurred post-shipment.

In some cases recall of the product or some batches of the product may be indicated. Many regulatory agencies offer guidance to assist in product recalls and assist companies in understanding their obligations with respect to governing laws and regulations. Product manufacturer may want to consider these resources in order to design a system to handle the recall of products before such a recall is necessary.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Identify any potential hazards or product defects that may present a substantial risk to users.
- Internal policies and procedures. Policies developed should describe a
- Comprehensive plan reaches throughout the entire distribution chain, and to end-users who may have the product in their possession, and should address:
  - Ability to locate potentially non-compliant products quickly;
  - Ability to remove non-compliant products from distribution pipeline and possession of end-user; and,
  - Ability to communicate hazards about the non-complaiant product in an understandable (and timely) manner.
  - Manufacturers' corporate policies aligned with these regulations or standards.
- Required procedure(s) for reporting non-compliant products, should be widely known
- Personnel with authority to take the steps necessary to initiate and implement product recalls with the support of appropriate management.

Developmental
- Identify persons within the organization who play a key role in identifying and responding to product recalls and safe use complaints.

- Develop plans for a coordinated and consistent method of identifying and responding to environmental, health and safety allegations that involve the product.

Operational
- Procedures are implemented to respond to customers communications regarding substandard or defective product.
- Key staff assigned to quality assurance and/or customer support must review customer complaint information and, if appropriate, involve product development and HSE personnel.
- Customer complaints and product recalls are reviewed with management, product development, customer support, and/or HSE personnel, providing a basis for enhanced product stewardship.

Re-Evaluating
- Periodically review product recall and response to safe use complaints practices.
- Beyond solving the immediate problem that triggered the complaint, one should integrate lessons learned into design criteria for future new product development.

Manufacturing Management Code Overview

I.   Purpose

The Manufacturing Management Code under Coatings Care® seeks to assist companies in their efforts to conduct their day-to-day plant operations in a manner that is consistent with established health, safety and environmental practices. The goal of the Manufacturing Code is to develop an effective management system for addressing health, safety and environmental responsibilities, including the regulatory requirements and related operational considerations that define an effective program. The resources in this code reflect established management approaches currently used by the industry.

Furthermore, this code was created with the knowledge that paint and coatings companies have invested considerable resources in their current programs. As a practical matter, the resources contained in this document are intended to complement and support current approaches for addressing health, safety and environmental responsibilities. The resources for consideration under this code reflects regulatory and legislative requirements as well as industry trade practice in the areas of employee protection, community and environmental protection, waste management practices, and other aspects of plant operations.

II.   Management Practices

Because of the extensive amount of information required for consideration, the Manufacturing Management Code has been arranged in three separate "volumes" covering the key topics. They include:

> Volume 1   Occupational Safety and Health
> Volume 2   Process Safety (Operations)
> Volume 3   Environmental Management

In detailing the suggested activities and other resources for this code, some degree of overlap between the management practices has resulted. While this overlap has been minimized in the final document, several critical activities (such as review of applicable regulatory requirements) are repeated periodically to emphasize their importance and to make certain they are completed. Any redundancies or overlap identified in the suggested activities can be mitigated by careful documentation of progress made.

OCCUPATIONAL SAFETY AND HEALTH (VOLUME 1)

HEALTH AND SAFETY SYSTEMS AND RECORDS (1.1)

Establish and maintain systems for collecting and analyzing data and maintaining records to evaluate health and safety performance, determine trends, and identify areas for improvement in accordance with recognized management systems

Every facility needs a system for collecting and evaluating information on adverse events relating to workplace health and safety ("incidents") in order to improve future performance and, in many cases, to meet regulatory requirements. Regulations determine the basis for reporting, recording, and publishing certain types of events. Some firms have adopted other measures of performance as well.

1.   Decide upon the parameters for measuring health and safety performance for a facility or firm, giving due regard to regulatory requirements.

The number of incidents that have occurred over a specified period of time has traditionally been the measure of health and safety performance. Many regulations require that industrial injuries and occupational illnesses be recorded, classified, and reported in a specific manner. Fires, spills, work-related motor vehicle incidents, and injuries to non-employee entrants to the facility are also tracked by many firms. Such incidents are all event-based occurrences that can have negative outcomes. The frequency of such incidents is usually calculated for standard time intervals (days, weeks, etc.).

Positive specified performance measures of affirmative activity, have recently been gaining acceptance including number and frequency of employee training, safety briefings and safety emphasis events. Other performance indicators or measures could include Health, Safety and Environment (HSE) audit results or behaviorally based activities/programs/measurements.

2. Adopt a program for implementing the health and safety performance measurement system.

3. Periodically evaluate the effectiveness of the performance measurement system and refine the process accordingly.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Develop familiarity with appropriate applicable regulations.
- Understand the practical aspects of establishing an "Accident & Injury Reporting Program"
- Review, where applicable, participation in "Safety Award" programs and historical industry statistics.
- Develop familiarity with appropriate Management Information System (MIS) and other data resources for covered operations
- Review available government statistics (i.e. labor departments) information appropriate to the issue.
- Review appropriate statistics from any national safety organizations.

DEVELOPMENTAL
- Compare current company practices with appropriate regulations.
- Develop recordkeeping procedures that track regulatory requirements and allow analyses of trends.
- Integrate analytical procedures which consider appropriate corrective actions.
- Develop system to flag illness/injury information from facility personnel.
- Integrate illness/injury data into safety and health evaluations and use the data to prioritize the re-evaluation schedule.

OPERATIONAL
- Fully implement company health and safety performance data management plan.
- Communicate plans, as well as management practices to all employees.
- Provide summary of accidents/injuries/illnesses issued to all employees.
- Have annual summary of health and safety program performance reviewed by top management.
- Submit site data to any relevant "Safety Award" programs.

RE-EVALUATING
- Integrate health and safety performance data with insurance carrier information
- Implement risk management practices that seek to initiate control strategies for health and safety performance.
- Integrate data from program into facility planning for new process and work practices.
- Compare plant statistics with external data sources.

Plan and carry out periodic targeted inspections for conformity with site policies and practices

Workplace inspections should be carried out to ensure a safe and healthful environment, and also to meet federal, state and local regulations that apply to the facility. Develop and implement a program of *targeted* workplace health and safety inspections that:

- Use inspection teams that include facility employees;
- Require regular inspections;
- Employ checklists;
- Use team judgment to target inspections to areas, practices, or processes;
- Require documentation of findings and recommendations for improvement; and
- Require documented action on findings and recommendations.

In this instance *"targeted"* is intended to indicate that an area or procedure with a history of problems or record of high incident frequency or severity should be visited and evaluated on a more frequent basis.

Arrange, where practical, for a workgroup consisting of appropriate facility employees and managers to develop the inspection system. Empower the workgroup to determine the types of activities or facility areas to be inspected, and on what frequency, and to develop appropriate inspection forms and checklists. Ensure that inspection results and follow-up actions are documented.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Obtain and review applicable local regulations for site operation.
- Review site policies and practices.
- Review available information from past inspections (internal or compliance) and integrate recommendations into facility program.

DEVELOPMENTAL
- Develop and widely communicate site health and safety procedures to all facility personnel.
- Assign functional responsibility for undertaking targeted inspections with full management support.
- Compare current inspection procedures/practices against national guidelines.
- Document procedures for periodic, targeted inspections.
- Develop a written self-assessment program, including actual inspection procedures and forms.
- Develop critical performance criteria which will indicate effectiveness or success/accomplishment of the program.

OPERATIONAL
- Use formal, documented inspections to compare actual workplace observations and thereby establish site policies and practices.
- Inspection program should include reports to top management on facility performance.
- Execute planned periodic targeted inspections.
- Track the critical performance criteria.

- Integrate inspection program into facility planning, seeking to eliminate underlying hazards and integrate appropriate control strategies for new or modified operations.
- Include management in targeted inspections to demonstrate support for program objectives.

EMPLOYEE INVOLVEMENT (1.3)

Establish a mechanism to provide employees with the opportunity to identify and address health and safety concerns

Management effort dedicated to creating ways for employees to voice health and safety concerns and to address these concerns is good business. Effective employee involvement can lead to better workplace conditions, improved health and safety behavior, improvements in health and safety procedures, and better operating results.

Adopt a program for effective employee involvement in matters that could affect employee health and safety, taking into account the requirements of policies of the firm, labor agreements, and applicable government regulations.

1. Include systems for:

    - Multi-way communication of health and safety information to employees;
    - Obtaining employee input regarding health and safety including suggestions and concerns;
    - Providing feedback to employees regarding their health and safety suggestions and concerns;
    - Recognizing significant employee contributions to health and safety; and
    - Gauging the effectiveness of employee involvement.

2. Ensure employees receive information that explains how they can communicate their involvement, and that encourages them to do so.

3. For facilities that have operations requiring adherence to process safety management practices, ensure that all applicable aspects of the employee involvement program are documented.

Strive to integrate employee health and safety involvement with existing employee communication practices.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Obtain and review local regulations relating to employer responsibilities.
- Inform employees of management practice and company interest in establishing a program that encourages employee input.

DEVELOPMENTAL
- Write company policy encouraging employee participation.
- Develop procedures or forum for obtaining, tracking, and responding to employee inputs and concerns.
- Develop mechanism for instituting and tracking changes recommended through system.
- Develop rewards for employee inputs which result in significant improvements or savings.
- Develop/establish critical performance criteria which will indicate effectiveness or success of changes following implementation.

- Place written plan into operation under which:
  - Company interest and intent for employee participation in health and safety matters is publicized.
  - Employees are made aware of and participate in programs as evidenced by written suggestions or other formal requests at designated forums.
  - Any and all employee input is received and acknowledged and follow-up communications issued.
  - Changes made as a result of employee input are tracked.
- Institute an awards program to acknowledge employee impact.
- Track critical performance criteria for employee involvement.

RE-EVALUATING

- Integrate appropriate participatory management initiatives for health and safety concerns into management structure.
- Recognize employees for contributions which have resulted in improved performance or savings.
- Evaluate critical performance criteria instituting changes which result in improvements in performance and share changes/procedures with other company sites and with the industry through local mechanisms.

WRITTEN HEALTH AND SAFETY PROCEDURES (1.4)

Provide written up-to-date health and safety procedures appropriate to each site, including procedures to control entry and exit of personnel and materials to the site and restricted areas.

It is necessary for the protection of worker health and safety to establish clear written procedures for process operations and for other facility activities, including control of people and materials entering and leaving the facility.

1. Evaluate the facility's needs for written procedures pertaining to protection of worker health and safety, including control of access to the facility and/or to specific areas. Take into account all applicable regulatory requirements.

   Address such factors as size and complexity of the facility and its raw materials, pertinent industry regulations requiring formal procedures.

2. Develop a management system meeting regulatory requirements for creating, maintaining, and documenting all procedures that pertain to worker health and safety used in the facility. Use, where possible, multidisciplinary teams.

   Either individuals or teams may be used, depending upon facility and task complexity and scope. Involve the ultimate user(s) of the procedure. Strive to ensure regulatory compliance by training team members in their responsibilities.

3. Empower a team to create, revise, and document written procedures pertaining to worker health and safety, including control of access to the facility and/or controlled process areas.

4. Adjust facility staffing as necessary to meet program needs, and implement the program.

5. Periodically audit the program's performance for effectiveness and regulatory compliance, and make adjustments as necessary to address shortcomings.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Obtain and review local regulations which relate to documentation of facility operations and associated health and safety information.
- Review existing health and safety procedures.
- Interview employees at each defined job on-site to obtain first-hand information on actual procedure/practice.

DEVELOPMENTAL
- Establish a team of site workers to develop, review and update procedures as appropriate.
- Develop a listing of jobs with a brief description of associated work tasks.
- Demonstrate a commitment to developing simple and concise written health and safety procedures, readily understandable and acceptable for facility personnel.
- Advise that written health and safety procedures are being evaluated and modified.
- Ensure written procedures reflect applicable regulations and have specific content where required.

OPERATIONAL
- Put in place and communicate to employees written procedures to address health and safety considerations for all site operations.
- Clearly define management and employee roles in developing written procedures.
- Have the established team of site workers periodically review each safety and health procedure with the personnel actually involved so as to evaluate the procedure's effectiveness and accuracy.

RE-EVALUATING
- Develop a program for integrating results of site inspections and other program evaluations into improved written procedures.
- Integrate development of health and safety procedures into facility planning.

CONTRACTOR OPERATIONS (1.5)

Establish procedures to monitor operations of all contractors on-site, and to inform them of company-wide and/or site-specific health and safety policies and emergency response procedures

The following definitions are provided for clarifying some guidance in this practice:

Employee: A full- or part-time worker at a facility, either temporary or permanent, who receives both supervision and compensation directly from the firm managing that facility.

Contractor: An individual within a facility whose compensation and day-to-day activities or assignments are controlled by an independent firm, and NOT by the firm of the facility in which they work.

Visitor/Vendor: An individual person, other than an employee or contractor, who comes onto a facility for business or other purposes, and who does not influence workplace health or safety programs. Such persons may include consultants, sales representatives, and vendors such as people who service soda machines.

Employers should maintain a safe and healthful workplace for contractors as well as visitors and their own employees.

Facility management is responsible for ensuring that all contractors who enter a facility are informed of processes and materials hazards present there, and also of the facility's emergency plans and expectations for contractors in case of emergency. Furthermore, facility management is responsible for ensuring that contractors employ procedures at least as stringent as the facility's own procedures intended to prevent harm to any one present in the facility, and for confirming, through periodic inspections, that contractors follow such procedures. Applicable federal, state, and local regulations must be observed.

Develop and adopt a contractor orientation and safe-performance assurance program that encompasses the following:

1. Adopt procedures, and develop supporting informational materials, for indoctrinating contractors in safety and emergency procedures before any contract work begins, to include:

   - Warning systems and evacuation procedures;
   - Entry, exit, and limitations on movement within the facility;
   - Sources of harm from processes and/or materials, and measures for prevention, detection, and response;
   - Locations of safety data sheets (SDS's) in the workplace;
   - Facility safety rules applicable to contractors; and
   - Permit requirements for designated hazardous activities.

2. Adopt procedures for ensuring that all contractors have health and safety requirements that meet facility standards, including procedures for activities requiring permits and for control of hazardous energy.

3. Adopt procedures for monitoring contractor operations on site to ensure that procedures are followed.

4. Adopt procedures for periodic review of program performance and needs, and modify procedures accordingly.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
   - Review contractor involvement in all hazardous operation areas and inventory location of hazardous materials on site.
   - Review all site health and safety policies and emergency response procedures for functions or operations which may be performed or affected by contractors.
   - Obtain and review appropriate local requirements governing contractor operations on-site.

DEVELOPMENTAL
   - Update inventories of hazardous materials as required.
   - Develop initial orientation procedure to familiarize contractors with hazards specific to their function on-site.
   - Establish procedure for scheduling random inspections of contract operations for monitoring compliance.
   - Develop handbook of company/site health and safety policies and emergency response procedures.

OPERATIONAL
   - Require contractors to provide their written procedures for undertaking specific hazardous operations on-site and verify required employee training.

- Ask contractors to provide the company with their employee training handbook or copies of their health and safety and emergency response procedures.
- Review contractor plans and programs relative to site-specific hazards.
- Periodically monitor contractors for compliance and generation of hazards to company employees.
- During periodic inspections - ask questions of contractors relative to critical safety and health policies and emergency response procedures.
- Track trends in monitoring results of contractors on-site.

RE-EVALUATING
- Incorporate corrective actions from trend analysis into initial contractor orientation agenda and requirements.
- Alter or update company handbook as indicated from monitoring results.

EVALUATING AND ASSESSING HEALTH AND SAFETY HAZARDS (1.6)

Establish procedures for evaluating health and safety hazards and assessing risk to employees from processes, equipment, potentially hazardous chemical or physical agents, or site conditions

Employees may be exposed to a wide variety of chemical and physical hazards during normal and non-routine work activities. Process equipment and activities in and around the facility may put employees at risk to injury and illness. Facility management is responsible for providing a safe and healthful work environment for their employees.

Establish a system to effectively anticipate, recognize, evaluate, and control health and safety hazards at the facility. The evaluation, assessment, and/or inspection procedures can be as formal as a written document or as simple as a visual walkthrough evaluation. Adopt procedures for:

- Evaluating the facility to identify existing and potential health and safety hazards;
- Assessing the risks of identified hazards;
- Prioritizing the risks according to severity; and
- Instituting corrective actions to reduce the hazards.

Re-evaluate the facility periodically to reflect current guidelines and to identify and address new hazards.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review inventories of hazardous chemicals, physical agents, areas, conditions, and operations on-site.
- Review employee medical data specific to occupational hazards.
- Review inventory of monitoring equipment and capabilities.
- Review listing of engineering control systems and Personal Protective Equipment (PPE) used to control/protect workers from hazards.
- Review site occupational injury and illness reports.
- Obtain and review local regulations applicable to site.

DEVELOPMENTAL
- For each process or operation, develop detailed information on the hazards involved, the local regulations which apply, exposure monitoring requirements, personnel questionnaires/medical examinations, use of engineering controls, personal protective equipment (PPE) regulations, etc.
- Make a list of processes and operations and prioritize efforts to be addressed.

- Develop an ongoing monitoring program including employee medical examinations.
- Determine appropriate frequency for monitoring based on local laws/regulations, medical surveillance/physical exam results, and evaluate effectiveness of control systems for hazardous exposures.
- Establish critical performance criteria which will be used to undertake changes in programs, including accomplishments, procedures, illness and injury date, exposure monitoring results (personal and area), etc.

OPERATIONAL
- Perform hazard evaluations, employee monitoring, and occupational physicals; and employ and evaluate appropriate engineering controls and PPE.
- Involve employees in evaluations and monitoring of process controls.
- Solicit employee input for program modifications and adjustments.
- Collect and track critical performance criteria for program improvement.

RE-EVALUATING
- Refine monitoring/evaluation programs and occupational physical results in accordance with changes in the occupational illness/injury rates.
- Review and evaluate the critical performance criteria collected; and refine procedures accordingly.

HEALTH AND SAFETY TRAINING PROGRAMS (1.7)

Maintain health and safety training programs, and periodically evaluate their effectiveness while regularly communicating relevant health and safety information to employees

A well-trained workforce is essential for a safe and healthful workplace. To accomplish this it is necessary to establish an employee training program that includes the following elements:

- Determination of training needs for each segment of the employee population;
- Development of training programs consistent with needs;
- Timely, consistent delivery of training programs;
- Maintenance of comprehensive employee training records;
- Annual review and evaluation of training program effectiveness, including field observations; and
- Audits of employee training records.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Establish an inventory of all existing training programs and materials.
- Identify all processes, operations, and hazards where existing training programs apply.
- Obtain and review local regulations applicable to training needs.

DEVELOPMENTAL
- Enhance existing training programs to address hazards not covered adequately by existing programs.
- Develop program to evaluate effectiveness of training (i.e., employee interviews, questionnaires, or internal audits).
- Develop and implement procedure to track training requirements, conformance with requirements, compliance with regulations and results of training performance.

- Establish procedure for employee feedback on training.
- Identify critical performance criteria relevant for training, include criteria that will indicate compliance and effectiveness.

OPERATIONAL
- Develop and implement a comprehensive health and safety training program for all employees, and maintain it adequately to reflect regulatory requirements and changes to processes.
- Involve employees in scheduling training and evaluating program performance.
- Assist in making training meaningful and productive.
- Collect and track critical performance criteria statistics to assist program evaluation and enhancement.

RE-EVALUATING
- Continuously improve performance for training programs and enhance employee feedback and involvement.
- Review and evaluate the critical performance criteria data collected and integrate into design of new products or processes.

ACCESS TO MEDICAL PERSONNEL AND ASSISTANCE (1.8)

Provide access to competent health and safety personnel, and emergency medical assistance for people on the site

In case of a medical emergency, each facility must provide employees with access to medical treatment and transportation to medical care locations. Each facility must also provide required medical surveillance and have access to health and safety professionals, as required to evaluate and investigate health and safety concerns.

Establish, at each facility, a program that complies with all applicable regulations for providing emergency medical response in both routine and emergency situations and for providing employees with required medical examinations.

- Review the regulatory requirements applicable to the facility.
- Identify needs and available resources.
- Augment resources as needed.
- Establish written programs and supporting procedures that meet identified requirements for all employees on all shifts.
- Review program periodically to ensure that it reflects current information and to ensure that resources are available and functioning as intended.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review applicable local regulations.
- Review site accident & injury reporting log and related records indicating internal response.
- Review local (labor) statistics information appropriate to this issue.
- Identify site personnel responsible for safety, health, and emergency medical assistance.

DEVELOPMENTAL
- Compare site accident, illness/injury rates with industry performance and determine facility's need for additional support from competent safety and health personnel.

- Establish critical performance criteria which will indicate when health and safety professionals and emergency medical assistance should be accessed through consultants, insurance company, or from trained and qualified in-house staff.

OPERATIONAL
- Write procedures for assessing site health and safety personnel, and emergency medical assistance; access procedures are broadly communicated to all site personnel.
- Track the critical performance criteria previously established and use to make appropriate modifications to procedures where indicated.

RE-EVALUATING
- Evaluate the critical performance criteria and make changes as appropriate when developing new products or undertaking process modifications.
- Solicit employee comments concerning knowledge of access procedures and suggested improvements and incorporate changes as appropriate.

SITE AND FACILITY DESIGN AND MODIFICATION REVIEW (1.9)

Include procedures for reviewing the design and modification of sites, plants and job tasks, taking into account the following hierarchy: engineering controls (design); administrative controls (including material substitution); and the use of personal protective equipment

An effective process health and safety management system must include a program for reviewing and approving the design and modification of facilities, processes, raw materials, and job tasks. Such reviews should include consideration of the use of engineering controls, administrative controls, and the personal protective equipment as appropriate.

1. Establish a team to review and approve the design and modification of facilities, processes, raw materials, and job tasks to ensure that changes meet current health and safety standards.

Engineering controls include the design of equipment and protective measures to eliminate or minimize exposure to hazards. The hazards could be physical/equipment-related such as rotating shafts and nip points; process-related such as temperature extremes and static electricity; or be related to exposure to chemical substances. Administrative controls, such as job rotation, are intended to reduce exposure time to a particular hazard. Substitution with a less hazardous substance is another way to eliminate or reduce the hazard. The use of personal protective equipment (PPE) is a last resort when other controls cannot eliminate exposure to a safe level.

The responsibility for review of work practices with the aim to reduce or minimize hazards should rest with individuals, or groups of individuals, with appropriate training and experience. Qualified reviewers should understand the importance and significance of their work to the health and safety of their fellow employees.

2. Train team members as appropriate in management-of-change procedures and in preferred approaches to hazard management.

3. Ensure that all review-team recommendations are addressed and that the team documents its methods and decisions.

4. Provide for documentation and follow-up all team recommendations.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

- Review applicable local regulations.
- Review all plans for new, or modifications to, sites, plants, processes, or tasks.
- Check for review and approval of appropriate professionals (i.e. health and safety, fire, maintenance, plant management, engineering). Check for evidence of or references to appropriate industry standards and applicable regulations.

DEVELOPMENTAL
- Establish a mechanism which will ensure plans for new, or modifications to, plants, processes, or tasks are not processed without the critical review and approval of appropriate professionals.
- Ensure each professional reviewer has an established procedure for evaluating the subject plans and proposals.
- Establish a "plant team" of personnel which will be closely involved in the proposed change to review the change with management and suggest/discuss alternatives/improvements.

OPERATIONAL
- Communicate the review mechanism to site personnel.
- Appoint plant personnel to _plant team.
- Hold meetings to review design/modification plans and job task changes and proposals as necessary.
- Solicit recommendations and employee feedback.
- Have "plant team" involved in initiating project start-ups and available for consultation on day-to-day operations.

RE-EVALUATING
- Incorporate the review by specific professionals into the initial planning and development stages of new, or modifications to, plants, processes, or tasks.
- Have "plant team" give presentations during initial proposal reviews.

INVESTIGATION OF OCCUPATIONAL ILLNESSES, INJURIES, AND ACCIDENTS (1.10)

Require the prompt investigation of occupational illnesses, injuries, and accidents; corrective action to prevent recurrence and an evaluation of the effectiveness of corrective actions taken

Every incident investigation provides a unique opportunity to learn the incident's immediate and underlying cause(s), and to determine and implement opportunities for improvement.

Consider establishing a system for managing incident investigations that includes:

- Identifying, investigating, recording pertinent information on incidents that occur anywhere within the facility;
- Analysis of results of each investigation and report of recommendations; and
- Taking corrective actions for the purpose of reducing the frequency and/or severity of future incidents of a similar nature.

The investigative system should be viewed as a fact-finding process to prevent future incidents, rather than form the basis for blame.

Front-line supervisors often start the investigative process by completing the company's incident report form. A responsible individual should be assigned to review all completed incident reports, initiate follow-up corrective actions, and track them to completion. Information from this investigative process can lead to continuous improvement through identification of incident causes and adoption of suitable controls.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

> *AWARENESS*
> - Review applicable local regulations.
> - Review the accident and injury reporting logs for the site.
> - Review any additional accident investigation reports including follow-up activities initiated.
>
> *DEVELOPMENTAL*
> - Establish a mechanism to initiate site hazard evaluations, and require evaluation results to be reported and appropriate corrective actions implemented within a specified time periods.
> - Establish critical performance criteria which will indicate effectiveness of corrective actions following implementation.
>
> *OPERATIONAL*
> - Develop and implement procedure to properly initiate and complete investigations of occupational illnesses, injuries and accidents.
> - Communicate procedures broadly to employees, along with management commitment to undertake appropriate corrective action.
> - Implement a mechanism to collect and track the critical performance criteria data and make changes in procedures as appropriate.
>
> *RE-EVALUATING*
> - Incorporate procedure into proposal and design of new, or modifications to, plant, processes, or tasks.

OPERATIONS (PROCESS SAFETY, VOLUME 2)

EMPLOYEE, CONTRACTOR, AND VISITOR SAFETY (2.1)

Develop written procedures to ensure employee, contractor, and visitor safety during operations

Facility management must comply with federal, state, and local requirements for protecting the health and safety of employees, contractors, and visitors admitted for entry in the facility. In order to accomplish this, it is necessary to acknowledge the responsibility and consider the following practices:

1. Establish a facility process team to evaluate existing and new processes, standard operating procedures (SOPs), and the emergency response plan as they relate to the control and/or health and safety of visitors and employees.

2. Adopt a program for ensuring that employees, contractors, and visitors are provided information necessary to protect themselves and others when present in the facility by informing them of:

- All known process-related hazards that could affect them within the facility;
- The facility's emergency action plan, and emergency response procedures;
- Required safe work practices for employees and contractors;
- Prohibitions applicable to all entrants; and
- Requirements for control of their entry, whereabouts, and exit.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Compile a list of safe operating procedures (SOPs) required to address appropriate local regulations.
- Review existing written SOPs.

DEVELOPMENTAL
- For each plant process, list all procedures or operations which involve health and/or safety hazards including emergency situations and response requirements for operations personnel.
- Compare lists of existing SOPs with list required by local regulations.
- Establish a representative facility team of site and operations personnel with safety/health responsibilities to review each process which requires SOPs and develop additional content or improvements.

OPERATIONAL
- Facility team develops and broadly communicates SOPs required for site operations
- Periodically facility team evaluates effectiveness of SOPs and determines the need for revision or enhancements.
- Fully implement all SOPs at covered facility.

RE-EVALUATING
- Have established teams periodically enhance their own capabilities to develop SOPs by interviewing plant personnel and recruiting new team members.
- Establish mechanism to incorporate new ideas and findings from periodic evaluations of SOPs in planning for new processes operations.

DOCUMENTATION OF PROCESS INFORMATION (2.2)

Document relevant information about plant operations, facilities and process equipment which may be useful in health, safety and environmental management efforts

Documentation of process information is a key requirement for compliance with many occupational safety and health regulations.

1. Assemble a process safety information package for each identified process in order to identify and understand the hazards of operations subject to the standard. Include the hazards posed by the chemicals used in the process, the technology of the process, and information on the equipment used in the process.

2. Arrange for all required information to be compiled and organized for review before a process hazard analysis (PHA) is conducted.

3. Document the location(s) of each applicable information source and/or package.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

For each plant process, review:
- Written operating procedures.
- Equipment and facility maintenance logs (including failure rates, etc.).
- Raw material inventory and process/production records including those documenting equipment down time.
- Required local injury/illness records.
- Required environmental incidents reports.

DEVELOPMENTAL
- For each operating procedure identify the types of data or information which may be required to assess health, safety and environmental management efforts.
- Establish a procedure or system to collect or record all of the data/information identified.
- Clearly determine how required information may be generated, made available, used, or interpreted by others to support ongoing health, safety or environmental management efforts.

OPERATIONAL
- Implement procedures for documenting required health, safety and environmental information.
- Improve management efforts by clearly identifying health, safety and environmental information sources and establishing linkages to existing reporting mechanisms (internal and required regulatory).

RE-EVALUATING
- Periodically review information requirements and locate additional resources which may be of use in health, safety, or environmental management efforts.

PROCESS PROCEDURES DOCUMENTATION (2.3)

Document procedures for all process operations and maintenance, including start-up and shutdown

Clear, comprehensive, and up-to-date process and maintenance procedures help to ensure that facilities are operated in a consistent manner, that emergency situations are handled properly, and that employees understand how to do their jobs safely. Documentation of the steps necessary to develop and revise procedures enhances management's ability to oversee this function.

1. Develop and implement written standard operating procedures (SOPs) and maintenance procedures that are designed to ensure safe operation of chemical processes.

2. Confirm and document that these procedures are appropriate, clear, and consistent with desired operating and maintenance practices. Use written SOPs and maintenance procedures for training employees.

Emphasize management expectations regarding process safety, and the need for maintaining consistent practices among operating and maintenance personnel.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review all plant operating instructions and written procedures for process/operations.
- Review all operating equipment manuals.

- Compile a complete file of all operating instructions and/or procedures.
- Establish a plant team to review the complete file and identify needed enhancements.
- Establish a team of facility personnel for each process to develop instructions or procedures previously identified.

OPERATIONAL
- Test each new instruction/procedure.
- Have the plant team do on-site evaluations of the new instructions/procedures, provide input to each "process team" for updating.

RE-EVALUATING
- Incorporate feedback from plant team into instructions/procedures.
- Appoint new members to plant team and continue to review and evaluate procedures.

EQUIPMENT INSPECTION PROGRAM (2.4)

For process equipment, establish a written program for timely inspections of such equipment, including regular testing of all pressure-relieving devices and warning systems

Facility management is responsible for ensuring that a safe workplace is provided for all employees. One aspect of this safe workplace is properly installed, operated and maintained equipment. A periodic inspection program is critical for maintaining equipment and structures in proper working condition.

1. Identify the facility's critical equipment and structures, i.e., those whose failure could subject employees, the community, or the environment to significant harm.

2. Establish a comprehensive equipment inspection program for ensuring, with full documentation, that critical structures and components in process systems perform as intended throughout their service lives. As a minimum, such a program must include the following elements:

   - Equipment records
   - Inspection and testing procedures and training
   - Documented inspections and tests
   - Periodic reviews of the program to ensure appropriate procedures and frequencies

3. Conduct periodic reviews to assess the program's success in meeting goals.

4. Modify the program as needed, based either on changing conditions or requirements.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review existing program for undertaking facility inspections of process equipment.
- Identify the plant pressure vessels and pressure-relieving devices, tanks, valves, associated tanks, piping and transfer stations.
- For each process develop flow diagrams and schematics for pressure vessels, pressure-relieving devices, valves, piping, and transfer stations.
- Review appropriate local regulatory requirements which relate to pressure vessels, storage tanks and associated piping.

- Finalize written master inventory listing and process flow diagram indicating locations of all pressure vessels, pressure relieving-devices, and transfer stations.
- Establish procedure for input on safety/health/plant management from maintenance and process personnel and solicit employee input.
- Develop and expand written program on process equipment inspections, taking into account appropriate compliance requirements.
  - Develop written procedures to document and record results of inspections of all devices.

OPERATIONAL
- Fully implement written program for process equipment inspections and communicate results to all employees.
- Use results of inspections to initiate corrective action and direct required maintenance.

RE-EVALUATING
- Have team perform periodic inspections/evaluations of the items evaluated.
- Update programs to reflect inspection/evaluation findings.

PROCESS TRAINING PROGRAM (2.5)

Develop and administer an employee-training program to ensure safe operation and maintenance of all applicable processes and equipment

Ensuring that employees are well trained is essential for health and safety (and for quality and efficiency as well) in the manufacture of coatings, because processes are often complex and involve large quantities of hazardous chemicals.

1. Adopt a program for training and qualifying operations and maintenance employees to ensure that operations, maintenance, inspection, and testing activities are strictly controlled. Include in the program:

   - The measures that employees can take to protect themselves from workplace hazards;
   - The specific procedures implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures and use of personal protective equipment; and
   - The safe operation and proper maintenance of manufacturing equipment, machinery and facilities.

2. Strive to make training a partnership between employees and management working together. Ensure that trainees can comprehend and apply the material presented. Require that trainees demonstrate proficiency and comprehension.

3. Maintain records of each employee's training for as long as he/she is employed, and thereafter as long as required by applicable local, state, or federal requirements.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- For each process, review existing employee training programs relating to operation and maintenance of equipment.
- For each process, develop a list of standard operating procedures (SOPs) necessary to define and characterize facility operations, equipment maintenance, and any other facility, equipment, or process-related procedure or operation.

- For each process, review appropriate local regulations.

- Compare existing training programs on operations and maintenance to new list developed.
- Establish mechanism for soliciting employee input on development of training program and its requirements.
- Determine if training programs have mechanisms to demonstrate trainee comprehension and capabilities where appropriate.
- Develop site evaluation criteria to analyze training effectiveness and identify areas of emphasis.

OPERATIONAL
- Implement written operation and maintenance training program for all processes and equipment.
- Perform periodic site evaluations and use results to evaluate effectiveness and identify areas of emphasis.

RE-EVALUATING
- Compare results of training programs to accident/illness rates to develop indication of overall program effectiveness.
- Monitor maintenance logs for facility equipment to develop early effectiveness.
- Participate at technical/peer conferences to identify areas of emphasis for indications of potential problems; make appropriate changes in training programs.
- Collect and report data on training program.

HAZARD ASSESSMENTS AND RISK REDUCTION (2.6)

Perform and document an assessment of hazards for existing and planned manufacturing facilities and take appropriate action to minimize risks identified by the assessment

Manufacturers must systematically investigate the hazards posed by processes within each facility in order to prevent harm from process accidents. One good investigative method is the process hazard analysis (PHA).

1. Organize a process hazard analysis (PHA) team that includes all pertinent expertise. Select knowledgeable people, (including employees, technical specialists, and managers) from affected parts of the facility.

2. After appropriate training, empower the PHA team to:

- Identify sources of process hazards through the collection and analysis of process information and data.
- Conduct risk assessments for hazards identified, i.e., estimate the potential frequency and severity of incidents attributable to each, including foreseeable deviations from normal conditions.
- Develop possible risk management measures (corrective actions) for substantial risks and for minor risks that can be readily corrected.
- Report results and recommendations to facility management.

3. Prioritize corrective measures according to risk assessment results, and establish an timetable for enacting these measures.

4. Conduct periodic management reviews to ensure that the timetable is being met, and, if not, adjust priorities accordingly.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
For each process within a manufacturing facility, obtain and review any available:

- Process hazard assessment (or hazard analyses).
- Operating procedures or process "check lists".
- Incident/illness/injury logs for process operations.
- Listing and location of engineering and administrative controls.

DEVELOPMENTAL
- Obtain and review local regulations applicable to the process and to the process hazard analysis.
- Establish a review process and/or develop procedures for:
  - Recognizing and evaluating known hazards and hazardous operations
  - Analyzing previous incidents
  - Identifying appropriate engineering and administrative controls
  - Evaluating potential consequences of failure of controls
  - Anticipating human factors critical to process safety

OPERATIONAL
- Management team will regularly undertake an assessment of potential health and safety hazards and communicate on these hazards to facility personnel responsible for developing and maintaining control strategies and/or equipment.
- Hazard assessment is documented in writing and used to foster appropriate program enhancements.

RE-EVALUATING
- Management supports continuous improvements in process controls.

SAFE STORAGE AND HANDLING (2.7)

Establish procedures for the safe storage and handling of all raw materials, intermediates, and products manufactured, used and/or stored onsite

The storage and handling of chemicals is a heavily regulated activity. From the time chemicals are received from a supplier until they are shipped to a customer, they are subject to specific storage and handling requirements and safeguards for the protection of worker and community health and safety, including the ergonomic aspects of handling.

Employ storage and handling practices for chemical materials that meet requirements of federal, state, and local regulations. Ensure that these practices cover chemicals classified as hazardous at all times that they are present in the facility, from the time they arrive as raw materials until they leave as either product or waste. It may be useful to introduce a hazard coding scheme for raw materials.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Identify and review existing storage and handling procedures applicable to raw materials, intermediates and products.
- Review local regulations specific to the storage and handling of the materials identified.
- Obtain and review applicable building and/or fire codes affecting storage.

- Obtain employee input on existing procedures for storage and handling and use to determine emphasis on ergonomic considerations.
- Storage and handling procedures for each raw material, intermediate and products written and communicated to all personnel affected.

OPERATIONAL
- All storage and handling procedures are written and implemented for all facility operations.
- Employees responsible for storage and handling perform periodic on-site evaluations of conformance with procedures, documenting findings and developing recommended improvements for implementation.

RE-EVALUATING
- Periodically re-evaluate storage and handling procedures.
- Use incident/illness/injury records and operations/maintenance inspection results to identify storage and handling practices.

FACILITY SECURITY PLAN (2.8)

Develop a site security plan addressing unauthorized entry, vandalism and other relevant considerations

Protecting coatings manufacturing facilities from unauthorized entry, and/or access to sensitive areas of the facility is critical in preventing sabotage, vandalism, and theft of physical or intellectual property. It also prevents injury or hazardous exposure of intruders, and is an important factor in preventing workplace violence.

1. Evaluate facility security requirements based on such factors as:

   - Nature of area surrounding the facility;
   - Nature and quantity of hazardous materials present in the facility;
   - Physical barriers to entry (e.g., fences, staffed gates);
   - Means of detecting intrusion attempts;
   - History of unauthorized entries; and
   - Regulatory requirements.

2. Adopt a facility protection program adequate to meet the threat of unauthorized entry to the facility, usually including at least the following:

   - Appointment of a security coordinator;
   - Training of security personnel;
   - Employee admittance procedures;
   - Contractor admittance procedures;
   - Access for emergency vehicles;
   - Access for non-emergency vehicles;
   - Regular assessment of security efforts; and
   - Procedures for emergency situations.

3. Consider adopting a workplace violence prevention program.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review existing site security operating procedures including facility opening/closing and process shutdown.
- Identify and list all possible points of entry to facility.
- Review available security logs.
- Review available incident reports on any unauthorized entry or vandalism event.
- Review local regulations appropriate to site security including provision for access by police and/or other emergency response personnel.

DEVELOPMENTAL
- Perform walk-through survey at facility to determine if existing security efforts adequately address all possible points of entry.
- Consider provision of security plan for unlawful entry during working hours, access by those seeking employees and medical and local police emergency notification procedures, to address health problems and/or criminal activity.
- Expand or develop plan for areas found to be lacking.

OPERATIONAL
- Perform introduction training for plant personnel on site security measures.
- Specialty training for security personnel undertaken by a competent provider.

RE-EVALUATING
- Periodically re-evaluate site security plan, solicit employee input and recommend improvements.
- Keep track of security logs, maintenance/incident logs to identity potential plan improvements.

ENVIRONMENTAL MANAGEMENT (VOLUME 3)

Over the years since the establishment of Coatings Care, management experts have suggested a better order for addressing the Environmental Management guidelines. Accordingly, the references here align with the new order but also retain a reference to the former guidance.

OBTAINING MANAGEMENT COMMITMENT (3.1) (NOTE: FORMERLY 3.2)

Obtain and maintain a clear commitment from company management to reduce emissions and discharges to all media and the off-site transfer of waste

As with most efforts undertaken by companies, success is best achieved when management is involved early, provides adequate resources consistent with business needs, and continues to be supportive through completion of the project.

Top management's support provides those who will be involved in the effort with a clear sense of the firm's intention to better manage health, safety, and environmental responsibilities.

Maintaining compliance with the myriad of regulations facing coatings manufacturers is another benefit management has linked to reliance on Coatings Care® resources. For this goal to be achieved, however, firms need to integrate Coatings Care® into their existing management or compliance programs.
The most valuable management perspective that will sustain Coatings Care® is one based on the program's ability to add business value. Coatings Care® offers tangible (and intangible) benefits to firms seeking to

optimize their resource investments in HSE programs. One obvious benefit is the way in which Coatings Care® (and in particular the Environmental Management aspects of the Manufacturing Management Code) can help firms to explore ways in which to reduce emissions, discharges and off-site transfers of waste. Programs designed to accomplish this include pollution prevention, environmental management, or waste minimization. They are usually undertaken with strong management support because of the business value they offer (e.g., reduction of costs for pollution control/waste management, reduction or elimination of fines and/or penalties, and less burdensome permit conditions) as well as organizational (programmatic) benefits. Those responsible for the consideration of Coatings Care® resources must communicate effectively with management on the business value of the effort, particularly with respect to the reduction of emissions, discharges, and off-site transfers.

Organizing an effective EMS requires teamwork. All participants need to be aware of their accountability for the consideration effort, from top management to facility management to staff assigned specific tasks. It is particularly important to reinforce this as corporate goals and objectives are communicated to manufacturing facilities for consideration. Broad management support and shared accountability for reaching these goals requires a mutual understanding. In many firms, management has accomplished this by establishing "pollution prevention" or "waste management" teams charged with finding the "best" ways for their firms to plan and implement efforts to meet targeted reductions.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review all applicable regulations affecting emissions, discharges and off-site transfer.
- Assess the impact of regulatory requirements on site operations including cost of compliance, staffing and support, and control equipment.
- Review available Pollution Prevention Programs relating to management support.

DEVELOPMENTAL
- Involve management in planning of targeted approach to achieve specific reduction goals.
- Develop organizational or facility planning for enlisting site personnel, and obtaining equipment and materials needed to pursue targeted reductions.
- Based on available information, develop an inventory of all process emissions, discharges and off-site transfers (see I. 3.6).

OPERATIONAL
- Provide written documentation of targeted, organized approach to achieve reduction goals.
- Key staff assigned and clear responsibilities identified for pursuing planned reductions.
- Management commitment to planned reductions includes approval of plan, allocation of resources, and continued involvement to monitor progress and establish new goals.

RE-EVALUATING
- Management supports peer leadership activities to highlight pollution prevention efforts, such as awards programs and technical conferences.
- Integrated cost-benefit analysis undertaken to support continued improvements.
- Independent evaluation of facility program undertaken with full management support, including review and integration of findings.

CREATING AN ENVIRONMENTAL MANAGEMENT SYSTEM (3.2) (NOTE: FORMERLY 3.1)
Develop a written environmental management system

This practice covers the development of an organized approach to environmental planning to aid facilities in dealing with management issues generated by facility operations and the myriad of federal, state, and local

environmental regulatory requirements that affect them. While compliance with such regulatory requirements is of critical concern for most coatings firms and facilities, it is increasingly important to look at these obligations from a management perspective.

An organized, structured approach to environmental management, integrated throughout the facility's operations, is called an environmental management system (EMS) and it is the critical foundation for addressing all of the environmental management practices under the Coatings Care® resources. Implementing an effective EMS will enhance business value, improve environmental performance, and aid in managing this complex function.

This management practice outlines the elements of an EMS that integrates environmental control efforts. An EMS for a facility contains details of:

- Program structure;
- Internal and external communications;
- Procedures for monitoring environmental and/or process control systems;
- Recordkeeping;
- Emergency response;
- Initiation of corrective actions;
- Integrating the EMS in facility planning;
- Employee training

Coatings Care® provides the framework for developing the EMS. It draws upon established international EMS standards such as ISO 14001. Consequently, implementing an EMS by following Coatings Care® resources can help a firm or facility prepare for eventual conformance with such standards.

The resources provided here and in other sections in the Manufacturing Management Code cover aspect of programs that may already be in place at many facilities. Nevertheless, organizing and coordinating environmental control efforts under a facility EMS offers several
potential benefits:

- Improved environmental performance;
- Reduced liability;
- Improved and/easier compliance with laws and regulations;
- Potential regulatory relief;
- Reduced costs for insurance, water, waste management, and energy;
- Enhanced customer trust/competitive edge;
- Employee involvement/commitment to improved environment;
- Enhanced public image; and
- Easier access to capital.

Establishing an EMS is a long-term strategic effort, particularly with respect to realization of some of the business-related benefits outlined above. The key to an effective environmental management system is the use of an organized approach to planning, controlling, measuring and improving the facility's efforts. Potentially significant improvements and cost savings can be achieved by periodically reviewing the organizational processes that have become part of the environmental management program.

Implementing a comprehensive EMS involves significant management effort and attendant costs. Yet manufacturers and other organizations following Coatings Care® resources are convinced that the organizational benefits far outweigh the costs. The Coatings Care® framework, including the resources

contained in this document, has been designed to minimize the effort and maximize the benefits of establishing an EMS.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Obtain and review environmental regulations pertaining to facility operations (including air, water, and solid waste).
- Obtain and review publications pertaining to environmental control requirements, including guidance manuals and applicable bulletins.
- Review the extent of current facility environmental control efforts, including assigned personnel, existing permits/recordkeeping/reporting activities, and environmental control practices.

DEVELOPMENTAL
- Initiate planning for an environmental management program which addresses all potential environmental impacts, regulatory requirements, and any identified facility or corporate objectives.
- Determine the required structure for the facility/corporate environmental management plan, including assigning of personnel, outlining clear responsibilities, and establishing communication mechanisms.
- Review existing records on environmental management efforts and, where required, develop revised practices and procedures which provide better, more functional documentation.

OPERATIONAL
- Written environmental management program (EMP) developed and implemented including details on:
  - Structure of program
  - Internal and external communications
  - Procedures for monitoring environmental and/or process control systems
  - Recordkeeping
  - Emergency response
  - Initiating corrective action
  - Integrating the EMP into facility planning
- Key staff assigned to EMP with clear responsibilities identified.
- EMP reviewed and supported by management, including allocation of required resources.

RE-EVALUATING
- Independent assessment of EMP undertaken through peer review, qualified consultant, or certification under an applicable consensus standard.
- Facility EMP integrated with communications efforts under the Community Responsibility Code.
- Cost-benefit analyses of EMP efforts used in facility planning.

TRACKING COMPLIANCE (3.3) (FORMERLY 3.11)

Maintain all applicable facility environmental permits

This management practice focuses on facility environmental permits and underlying compliance requirements that call for established programs and practices for meeting legal obligations (i.e., Clean Air Act Operating Permit, Resource Conservation and Recovery Act Permit, etc.). Implementing this management practice will help facility management to determine if:

- The facility has all required environmental permits;
- All the required "performance criteria" in permits (i.e., allowable emissions) are understood;
- Compliance issues associated with permits are being evaluated and addressed;
- Proper consideration is given to improving performance when updating or modifying permits; and
- Opportunities for lowering costs and improving efficiencies are explored when considering permit requirements.

Compliance with facility permits and other regulations is important to avoid costly legal penalties, maintain public image, and facilitate future regulatory negotiations. Facility management and personnel need to identify and clearly understand permit conditions, and maintain facility compliance as an integral part of the environmental management system (EMS).

To assure that current permits are renewed and to help facilitate permit applications, a permit schedule (timeline) should be developed. First, compare old permit conditions with renewed permit conditions and consider future facility upgrades and process changes in the permit application or renewal process. It is important to understand the potential operational impacts that could arise from changes in permit requirements (or vice versa).

It is important to emphasize that while many facility permits relate to operating conditions or the allowable levels of discharges, emissions or process releases. Permits are primarily administrative requirements and are important to assess, verify and maintain compliance conditions.

ENVIRONMENTAL ASSESSMENT (INVENTORY OF EMISSIONS, WASTES, AND RELEASES) (3.6)

Develop a quantitative inventory of emissions and discharges to all media and the off-site transfer of wastes from each site

This practice focuses on the quantification of all materials released by a facility to, or deposited as solid waste into, the environment. Such quantification efforts help to establish an "inventory" of all process-generated wastes, discharges, and releases. Included in this inventory are materials subject to complex regulatory requirements and facility operating permits.

Complete a quantitative inventory of facility emissions, discharges, and unrecovered wastes by first identifying and reviewing facility operations and develop profiles for each. Prepare a report to management that includes not only inventory findings, but also ideas for reducing emissions, releases, and waste generation.

Develop written procedures for assessing the potential environmental impact of proposed new raw materials or process changes. Complete a quantitative inventory of facility emissions, discharges, and unrecovered wastes by first identifying and reviewing facility operations and develop profiles for each. Prepare a report to management that includes not only inventory findings, but also ideas for reducing emissions, releases, and waste generation.

Develop written procedures for assessing the potential environmental impact of proposed new raw materials or process changes.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

- Develop awareness of all regulatory requirements associated with facility emissions, releases, discharges, and off-site transfers.
- Identify applicable permit conditions for air emissions, criteria pollutants, and National pollutant discharge elimination system, storm water, or publicly owned treatment works discharges.
- Review available Emissions Estimation Manuals.
- Identify and quantify the extent to which the facility is engaged in recycling and recovery activities.
- Review procedures and regulatory requirements for spills including reportable quantities.

DEVELOPMENTAL
- Identify available quantitative and qualitative measures of permitted emissions, discharges, releases, and off-site transfers of hazardous and solid wastes.
- Advise facility management of the need, and obtain support, for collection of relevant information on facility practices associated with addressing potential emissions, discharges, waste disposal, and recycling/reuse from production, purchasing, and site operations personnel.
- Initiate a "pilot project" to track emissions, discharges, releases and off-site transfers for a small number of production units, or for a few specific raw materials in use at a given site.

OPERATIONAL
- Procedures developed to quantify emissions, discharges, releases, off-site transfers, and recycling/reuse activities at a given site.
- Individual assigned to review emissions inventory procedures when considering the introduction of a new raw material, product or process modification.
- Quantification of existing emission inventory completed by assigned staff, and facility report developed for use in addressing regulatory requirements.

RE-EVALUATING
- Emission inventory quantitative data analyzed and integrated in planning production and process changes.

TARGETING REDUCTIONS (3.4)

Establish priorities, plans and quantifiable goals for reducing emissions and discharges to all media and the off-site transfer of wastes

This section focuses on pollution prevention, which is an important aspect of a productive environmental management system (EMS).

The hierarchy of priorities in pollution prevention should be:

1. Prevent or minimize emissions and waste generation preferably **at the source**.

   NOTE: Many times this can be accomplished by considering feasible formulation changes, process modifications or other techniques identified in the Coatings Care® Product Stewardship Code.

2. Recycle/or reuse leftover material that might otherwise be considered a waste.

3. Treat wastes (if permissible).

4. Properly dispose of those materials that are truly wastes.

Facilities should establish plans that include priorities and quantifiable goals for targeted reductions in emissions, discharges, and off-site transfers of wastes. Plan outlines should be communicated to interested parties and reviewed on a periodic basis.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Read applicable regulations pertaining to facility emissions, discharges, releases and off-site transfers.
- Identify facility processes and operations which may result in emissions, discharges, releases or off-site transfers.

DEVELOPMENTAL
- Mechanism developed for quantifying emissions, discharges, releases and off-site transfers.
- Site personnel are establishing procedures to prioritize pollution prevention efforts, and undertake targeted reductions from current levels of emissions, releases, discharges and off-site transfers.
- Prioritize efforts based on magnitude of emission and/or release, potential for adverse environmental impact if current controls are breached, and cost and ease of reduction.
- Initial planning effort links priorities to resources as a means of establishing short and long-term goals.

OPERATIONAL
- Integrated plan for reducing emissions, discharges and off-site transfers written and implemented.
- Company personnel assigned to implement plan.
- Mechanism in place for reporting on progress to achieve established goals.

RE-EVALUATING
- Priorities, plans and goal-setting for reductions reviewed annually by management and used for allocation of resources.

SPILL PREVENTION AND CONTROL (3.5) (FORMERLY 3.8)

Develop a spill control program for each site including procedures to monitor storage tanks and transfer piping for leaks and spills

A common element of an Environmental Management System (EMS) for a coatings facility is a spill prevention and control program. Such a program includes:

- Identification of potential spill areas;
- Development and utilization of procedures for governing operations so as to anticipate the potential for spills, minimize their frequency, and mitigate the severity of any that occur; and
- Ensuring that employees understand the importance of spill prevention and control and are well trained to recognize and manage spills in strict accordance with established procedures and regulations.
- Do not forget the effect of any fire-water run-off in case of emergency.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

- Read applicable regulations pertaining to the control of spills of oil and hazardous materials.
- Identify oil and hazardous materials storage and transfer areas (including loading docks, tank farms, and yard storage).
- Inform plant personnel of the need for coordinated response to spills and leaks.

DEVELOPMENTAL

- Develop a plot of the facility layout showing all storage and transfer areas and location and identity of significant quantities of oil and hazardous materials as well as any resources for spill containment and control.
- Review possible spill and leak scenarios and develop contingency procedures which might be used to mitigate environmental releases and worker safety concerns.
- Review contingency procedures with all employees and obtain feedback of how to implement awareness and training to support the facility plan.
- Initiate a practice drill to evaluate the spill and leak response plan.
- Develop inspection procedures for leak detection at tanks and transfer piping.

OPERATIONAL

- Develop written documentation for the spill control program, including response procedures, description of storage and transfer areas, leak detection and testing, and necessary employee training.
- Assign staff responsibilities for spill response and complete required training.
- Review with management the final spill control plan, including regulatory requirements for reporting spill incidents.
- Maintain records on the activities initiated under the spill control program, including incident response, training, corrective action and required reporting of spill incidence.
- Periodically conduct mock incident response exercises to ensure adequacy and effectiveness of training and resource.

RE-EVALUATING

- Integrate spill control design considerations in planning new or renovated facilities.
- Analyze records to determine actual costs associated with spill control efforts and potential benefits derived, including those costs avoided by plan implementation (i.e., environmental cleanup expenses, product and/or raw material losses, among others) and identify and target areas of improvement.

INVOLVING CONTRACTORS (3.6) (FORMERLY 3.10)

Establish procedures to monitor all contractors on site, to inform them of company and/or site-specific environmental policies and procedures

The purpose of this management practice is to develop procedures to ensure that the practices outlined in your company's environmental management system (EMS) are followed during contract work. This necessitates careful monitoring of contractors, their employees and their subcontractors while they perform work at your facility. Any contractor that is hired to perform work is also an employer and therefore responsible for the health, safety, and environmental (HSE) aspects of their work. However, facility owners and operators can be held liable for any adverse environmental impacts associated with the contractor's efforts.

When you bring contractors on-site to perform certain tasks that have health, safety or environmental (HSE) considerations, you may also assume certain responsibilities. Specifically, you should consider undertaking any or all the following in your efforts to ensure a safe and environmentally sound project:

- Evaluate the environmental compliance performance of contractors;
- Check that contractors have the proper insurance and required employee training;
- Check that contractors have necessary safety equipment;
- Agree which party takes responsibility for each aspect of the work;
- Inform contractors of relevant aspects of the facility's environmental management system;
- Evaluate the performance of contractors to ensure that they are fulfilling their obligations; and
- Include HSE requirements in all work contracts with contractors

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Organize and review written policies and procedures which relate to the environmental management program (EMP) and may be applicable to contractor operations.
- Review management practice with facility management to obtain approval and support for the effort to engage facility contractors' involvement in the EMP.
- Begin to identify contractors working on-site and develop initial communication on the need to address specific facility environmental policies and procedures.

DEVELOPMENTAL
- Provide appropriate facility environmental management practices to all current and potential contractors providing services in areas covered by the EMP.
- Identify site personnel making use of contractor services and advise them of the management practice, and enlist their support for contractor conformance.
- Develop a schedule of contractor support services for the site to aid in coordinating monitoring activities.

OPERATIONAL
- Written descriptions of contractor operations conducted on-site are available for review.
- Communication on EMP and required conformance with site policies and practices developed (and sent to each active contractor), documented, and maintained for management review.
- Purchasing (or procurement office) follows established procedure to communicate contractor EMP requirements with all procurement notices.
- Facility personnel assigned to evaluate contractor performance with EMP requirements and report to facility environmental management.

RE-EVALUATING
- Contractor evaluations integrated in planning for new site operations and processes.
- Contractor training verification done as part of the procurement process.
- Management support for contractor monitoring efforts includes recognition of exemplary performance by establishing a preferred provider status.

MANAGING PROCESS CHANGES (3.7) (FORMERLY 3.5)

Implement production processes that minimize impact on worker health, safety, and environment

Include in the facility's Environmental Management System (EMS) provisions for ensuring that facility planning and process design changes are consistent with organizational goals and objectives for environmental performance. An organizational commitment to pursue continuous improvement will include the establishment of procedures for incorporating operational changes that seek to comply with regulations

and incorporate new technology, equipment, or industry standards. Note that there will be overlap with the risk assessments required in Management Practice 1.6

Include in the facility's EMS provisions for the management of changes that occur from new legal or regulatory requirements, newly determined environmental health or safety risks, technology changes, financial or business requirements, and/or community concerns (or concerns raised by other outside entities).

Develop procedures to ensure that each process change and facility addition is carefully reviewed and approved by responsible parties, both environmental specialists and facility managers, to take advantage of their experience, knowledge, and judgment. Share lessons learned from successful programs to advance the understanding of the coatings industry.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Familiarize production planning and process design personnel with Manufacturing Management Code, including occupational safety and health, operations, and environmental management aspects.
- Acknowledge new efforts to conform process/production design considerations to established engineering standards and applicable regulatory requirements on health, safety and environmental control.
- Review available quantitative data on actual site conditions arising from process operations (i.e., worker exposure and environmental measurements).

DEVELOPMENTAL
- Develop process planning and design procedures, taking into account input from production employees as well as those assigned to HSE management.
- Identify production planning and design effort key information sources necessary to establish worker protection and environmental control.
- Develop quantitative data on actual site conditions (worker exposure, environmental measurements) and compare with compliance requirements.

OPERATIONAL
- Procedures established for developing new production facilities or processes which take into account HSE control considerations.
- Criteria established for site selection, facility layout, engineering controls, workplace and/or environmental measurement methods, and other considerations necessary to address potential impacts to worker health, safety and the environment.
- Formal process established to verify implementation efforts, including management review and employee input.

RE-EVALUATING
- Independent assessment of value of engineering approach and relevant findings integrated into planning process.
- Product planning and process design integrated with activities to address Community Responsibility Code.
- Through peer leadership efforts, communicate facility experience with process design and planning to support overall improvements in industry practice.

EMPLOYEE TRAINING (3.8) (FORMERLY 3.3)

Establish an ongoing education and training program for employees on the facility environmental management system (EMS)

Training and education in environmental awareness and emergency response must be provided to personnel, especially to those whose work activities may affect, or have the potential to create, a significant environmental impact. Training makes employees aware of the potential impacts of their work activities and aims to ensure that they will comply with regulations, work to prevent spills, and reduce wastes at the facility.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Review existing facility training practices on environmental management program (EMP) elements.
- Identify critical training tasks for the EMP, including recognition of process emissions, maintaining control systems, regulatory compliance requirements, reporting requirements and spill control. This should refer to a complete list of EMP components.
- Review applicable regulatory requirements for employee training.

DEVELOPMENTAL
- Facility personnel are assigned to develop employee training for the EMP.
- Advise employees on the planned enhancements to the training program and seek additional input.
- Co-ordinate plans for training with personnel office.

OPERATIONAL
- Written summary of EMP developed and communicated to all employees.
- Contents of EMP and required training elements reviewed with required facility personnel.
- Training on EMP conveys scope and application, specific assignments and procedures, individual and corporate responsibilities, management commitment, and continued employee involvement.
- Employee review of EMP conducted pre-placement and periodically thereafter based on identified need (i.e., process change, plan improvements, or to reaffirm employee responsibilities).

RE-EVALUATING
- Employees encouraged to suggest enhancements to EMP, expand their own training on environmental practices, and participate in training of new facility personnel.
- Employee training in EMP integrated with the training requirements of the Community Responsibility Code and into other job-related training and education.
- Management supports independent assessment of training program including review and integration of findings.

COMMUNICATING RESULTS (3.9) (FORMERLY 3.7)

Measure and analyze the results of environmental management efforts and communicate appropriate information to customers, suppliers, government agencies, and the public.

Environmental laws and regulations often require that facilities submit to regulators considerable information about the properties of the materials handled at the facility and other aspects of the facility's environmental performance. These reports may be available to the public. In many areas, active citizens' groups and/or the

press review submissions critically and respond to them vocally. Therefore, it behooves management to develop and maintain strong communications links with all affected entities.

Include in the facility's environmental management system (EMS) provisions for ensuring effective communication of information on organizational progress and key environmental events or issues. Direct communication to several diverse audiences (stakeholders), including top management, employees, customers, suppliers, governmental agencies, and the public.

In developing a comprehensive communication program, consider:

- Determination of appropriate spokespersons;
- Identification of technical resource personnel;
- Determination of the format and content of any communication; and
- Defining the circumstances under which planned communications are authorized to go forward.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review applicable regulations covering required facility environmental reporting.
- Identify key communication opportunities associated with customer interaction, procurement of raw materials from suppliers and/or distributors, and available resources from government agencies.

DEVELOPMENTAL
- Acknowledge the trend towards continued, periodic and/or increased reporting and analyze ways in which facility information sources can be organized, analyzed and integrated into communications.
- Assign personnel to develop required reporting and other communications in a manner consistent with regulatory requirements and the underlying facility environmental management program.
- Document significant changes to environmental management efforts resulting from improved processes (or enhanced capacity to assess potential environmental impacts) and integrate into required reporting and/or communications.
- Develop available communication channels for defining relevant information to targeted audiences.

OPERATIONAL
- Key communications to employees, customers, suppliers (and where relevant to the general public) contain accurate and appropriate characterizations of the organization's progress in implementing its environmental management program.
- Required government agency reporting documents in compliance with applicable regulations.
- Content of required reports (and other communications referencing environmental management) acknowledged and understood by facility management.

RE-EVALUATING
- Independent assessment of environmental management efforts used to help shape communications messages.
- Efficacy of facility environmental management program tested through participation in peer review or appropriate standard for certification, with results broadly communicated to customers and suppliers.
- Participation in industry-sponsored forums on environmental management appropriately showcase facility accomplishments and supports technology transfer through peer leadership.

Carry out periodic targeted inspections to evaluate the effectiveness of the environmental management system

This practice covers the establishment of mechanisms for assessing the effectiveness of a facility's environmental management system (EMS) in meeting its stated goals and objectives.

Many terms are used to describe the assessment effort. One term, auditing, is frequently used to describe the process of a systematic evaluation of a firm's EMS. The practice of auditing has emerged partly in response to the myriad of complex regulatory and compliance requirements faced by manufacturers. For firms with diverse, widespread operations, some form of auditing is regularly used as a means of determining the degree to which legal obligations are met.

In this management practice, the term environmental assessment, rather than audit, is used to characterize the process of evaluating the effectiveness of a facility's EMS, thus distancing the effort called for in this management practice from a typical compliance audit.

Establish programs and procedures covering the scope, frequency, methods, and reporting requirements for assessing the effectiveness of the facility's EMS. The assessment should include: (1) review of the specific practices used at the facility to meet management goals and objectives; (2) identification of any gaps or deficiencies for each of the specific environmental areas of concern; (3) review results of previous assessment efforts in order to determine adequacy of response to previously identified shortcomings.

A firm's EMS can be fully effective only if adequate attention is given to its oversight; management is able and willing to address deficiencies; and management is open to redirecting facility resources and amending facility policies and procedures to improve performance.

Two levels of assessments should be employed. The first is an internal effort in which trained facility personnel are used to determine the degree to which established systems and procedures are regularly followed. Conduct this self-assessment at least once per year, and take appropriate follow-up and remedial action whenever inconsistencies are found.

The second level of assessment makes use of external (i.e., not facility based) assessors. The function of the assessment is to serve as a reality check to determine if the established systems (planning, performance, regulatory, communications, etc.) are effective and fully implemented. This level of assessment not only addresses shortcomings in compliance with established procedures, but also determines whether a system is achieving the goal for which it was developed. Conduct second-level assessments regularly, but less frequently than first-level assessments (usually every three to five years).

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review available guidance documents on environmental audits and self-inspection.
- Inform top management of plans for self-inspection program and obtain support and approval for scope and application.

DEVELOPMENTAL
- Organize an appropriate site team to receive additional training on proposed facility auditing and inspection practices.

- Develop a plan to evaluate facility conformance with the environmental management program (EMP), focusing on follow-up to assigned responsibilities and correction of deficiencies.
- Foster employee support for the internal review process, by inviting input and involvement.

OPERATIONAL
- Facility environmental management personnel assigned to implement inspection program.
- Facility environmental management personnel develop inspection plan and submit in writing for management review.
- Procedures established for facility inspection of EMP.
- Periodic targeted inspections carried out and verified.
- Inspection results reviewed by management and integrated into EMP.

RE-EVALUATING
- Inspection results integrated into facility planning for new processes and renovations.
- Statistical summary of inspection results used to set priorities and environmental performance goals.
- Independent verification of effectiveness of EMP undertaken through use of intra/inter-company review, independent consultants, or applicable certification programs.

Transportation and Distribution
Code Overview

I.   Purpose

The Transportation and Distribution Code under Coatings Care® seeks to ensure the safe shipping of coatings products to the industry's customers, and to reinforce the integral role of health, safety and environmental considerations in the distribution chain.

Transportation and distribution practices for coatings products are extremely diverse and highly regulated. This code addresses hazardous material transportation requirements, including those applying to containers and packaging, marking, placarding, and carrier selection. Storage and warehousing restrictions associated with hazardous material regulations, fire codes and use permits are also considered.

Given the diversity of the industry's products and shipping practices, the Transportation and Distribution Code is intended to reflect good management practices. As a result, the code integrates practical and flexible considerations and resources for all companies to consider.

II.   Management Practices

TRAINING

TRAINING TRANSPORTATION AND DISTRIBUTION EMPLOYEES (1.1)

Establish a verification program to ensure that employees and contractors involved in transportation and distribution are trained to understand and comply with applicable procedures and regulatory requirements

Employee safety as well as the prevention of accidents during transportation and distribution activities is a primary concern for the paint and coatings industry. Additionally, the performance of some products is dependent on them being properly handled through the transportation process, and of course, the timely delivery of products to customers is important, too. These are all factors that should be considered for training transportation and distribution employees.

To meet business objectives and to assure the safety and health of workers, communities and the environment, the establishment of an effective training program for transportation and distribution employees, including appropriate refresher training, is necessary. Company operations that need to be addressed during the development of effective training program include: identifying the hazardous components of products; loading and unloading procedures; handling considerations; spill prevention and control measures; compliance with regulatory requirements, recordkeeping and any required certifications.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

> *AWARENESS*
> - All applicable regulations and other relevant documents should be identified, copies obtained and made available as necessary. .
> - Personnel responsible for transport and distribution activities should be identified, together with a precise description of their individual responsibilities.

- Train key personnel in transportation and distribution requirements by attending commercial course offerings or by other means.
- Establish a facility training policy.
- Leverage experience of trained staff, to establish formal training program and set up required training schedule.

OPERATIONAL
- Perform initial (and required ongoing) training of all employees involved in transportation and distribution activities focusing on regulatory compliance requirements and implementation of company-specific procedures.
- Contractor training verified as part of procurement process for shipping and/or distribution services, with periodic evaluations of contractor personnel assigned to key staff.
- Perform periodic reviews that include observation of contractor practices and interviews with contractor personnel.

RE-EVALUATING
- Training program re-evaluated and revised in response to regulatory changes, new products or packaging, or new transportation and/or distribution practices.
- Facility obtains independent assessment of training program by participating in industry peer review forum, through independent consultants, or participation in an established certification program.

MAINTAINING REGULATORY COMPLIANCE (1.2)

Maintain copies of all applicable regulations and internal compliance procedures

The distribution of paints and coatings is governed by a wide range of domestic and international regulations. These regulations are constantly changing. Utilizing the resources detailed in this management practice will not ensure compliance with all the regulations; however, it establishes a system to help you stay current with the regulations that impact your business. When dealing with paint and coating products, a facility should have in place a process to monitor changes and interpretations of new and existing regulations. To be of value, this process must be applied consistently.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review regulations applicable to site transportation and distribution activities.
- Assign staff support to seek interpretation of regulatory requirements and evaluate compliance status of current procedures.

DEVELOPMENTAL
- Establish procedure to obtain and maintain regulatory requirements and provide access for all facility personnel.
- Assign personnel to develop internal practices and procedures, integrating written compliance documentation and site-specific requirements.

OPERATIONAL
- Descriptions of applicable regulations and internal compliance procedures maintained on-site by assigned staff.

- Location and availability of compliance procedures and company practices widely known and accessible to employees.

RE-EVALUATING
- Periodic independent review of regulatory information conducted to verify current status of facility procedures.
- Provide industry input to emerging regulatory agency efforts, through participation in industry briefings and comments on proposed rules.

DEVELOPING WRITTEN POLICIES AND PROCEDURES (1.3)

Develop written policies and procedures relevant to the transportation and distribution of coatings products, intermediates and waste

Documented policies and procedures for transportation and distribution activities can be important tools especially when used to reinforce or even enhance a training program. The effort to document policies and procedures can also be used to establish a baseline or minimum level of performance for employees.

For example, an organization can demonstrate its top management commitment to its transportation and distribution training program by establishing a formal company employee training policy. Another example would be for the development of a company-specific requirement for the handling of a particular product over and above regulatory requirements or to an industry consensus standard. It is important that such requirements be broadly communicated to all the workers who may handle the product. The issuance of a company procedure for handling this particular product will reinforce any specific training provided.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Assign personnel to identify existing facility practices for transportation and distribution of products.
- Identify personnel supporting facility practices and educate them about the need for written policies and procedures for transportation and distribution activities.
- Review the need for written policies and procedures with management and obtain support for their development and implementation.

DEVELOPMENTAL
- Review existing facility procedures in light of regulatory requirements and industry trade practice (as reflected in consensus standards and guidance documents) and identify needed improvements.
- Initiate a "pilot project" to review new procedures and practices conforming to regulatory requirements.

OPERATIONAL
- Document policies and procedures on transportation and distribution activities associated with products, intermediates and wastes including:
  - Hazardous materials handling, loading and unloading
  - Packaging
  - Container management
  - Placarding and marking
  - Shipping documentation
- Policies and procedures maintained and widely accessible to employees
- Policies and procedures integrated in employee and contractor training programs

- Facility policies and procedures for transportation and distribution have established links to those developed under the requirements of the Manufacturing Management and Product Stewardship Codes.

CONTINUOUS IMPROVEMENT IN TRANSPORTATION AND DISTRIBUTION (1.4)

Establish policies and procedures which allow for continuous improvement of transportation and distribution safety

Employers need to periodically evaluate their training programs to see if the necessary skills, knowledge, and routines are properly understood and implemented by their trained employees. All training programs should have, as one of their critical components, a method for measuring effectiveness, and this method should be developed at the same time as the training program.

Periodic evaluation of a training program will help employers determine the amount of training their employees understood, and whether the desired results were obtained. If, after the evaluation, it appears that the trained employees are not at the level of knowledge and skill that was expected, the employer will need to revise the training program, provide retraining, or provide more frequent refresher training until the deficiency is resolved. Those who conducted the training and those who receive the training should also be consulted as to how best to improve the training process.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Evaluate facility experience with transportation and distribution practices, including cost, on-time delivery and safety.
- Identify facility personnel involved in transportation and distribution.
- Consider the cost and impact of potential transportation and distribution incidents, including spills (and other accidental releases) and fire hazards at storage and transfer facilities.

DEVELOPMENTAL
- Review cost and potential impact of transportation incidents with management and obtain approvals to pursue targeted improvement of facility program.
- Develop mechanism for obtaining timely information on transportation and distribution operations, and use such information to monitor safety and effectiveness.
- Review facility procedures with assigned staff and establish mechanism for assessing non-conformance and communicating to management.

OPERATIONAL
- Procedures written and implemented for monitoring transportation and distribution safety.
- Management supports continuous facility improvements in transportation and distribution safety, including endorsement of written policy committing facility to clear goals and objectives based on assessment of current performance.
- Non-conforming activities evaluated and changes made to operating procedures for transportation and distribution within an appropriate time period.

- Statistical review of facility records on product shipments used in developing new procedures and establishing goals for continuous improvement.
- Transportation and distribution conformance records integrated with other health, safety and environmental performance measures used to track continuous improvement.

RISK MANAGEMENT

SELECTION OF PRODUCT DISTRIBUTION FACILITIES (2.1)

Establish a written policy for the selection of product distribution facilities

Paint and coatings products are distributed in a variety of ways using internal resources (company personnel and facilities) as well as external (contractor personnel and facilities). Whether a company chooses to establish a captive distribution network (company operated and staffed) or uses contractors to undertake any or all of the distribution functions, it is important to identify and establish the criteria for selecting distribution facilities that meet the health, safety and environmental goals underscored in the Coatings Care® resources.

Reducing these goals to a written document helps to ensure uniform application of the policy. This management practice offers an example of a written policy for selecting distribution facilities. The policy also contains specific procedural steps that can be used for the selection of new distributors. Keep in mind that this offers just one example — your company may have different needs or concerns based upon specific manufacturing practices or production. The important point is to establish the minimum selection criteria which adequately address the health, safety and environmental concerns attendant to your company's processes and products, and then, apply those selection criteria uniformly.

This management practice is intended to develop decision-making criteria from existing facility practices and essential health, safety and environmental considerations embodied in regulatory obligations. It is important to stress that *this management practice seeks solely to provide guidance for use in making selection decisions and is not intended to direct specific business practices.*

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Identify facility personnel responsible for selecting product distribution facilities.
- Identify requirements for distribution facilities handling specific products, including hazardous and non-hazardous materials in all types of approved shipping containers used at the site.
- Review the requirements of the Transportation and Distribution Code with facility management and obtain the necessary approval and support for implementation.

DEVELOPMENTAL
- Develop a procedure for obtaining information on potential distribution facilities, including warehouse construction, fire protection/life safety devices (sprinkler system, general ventilation, security and emergency warning/alarms), and other key factors to support selection.
- Define criteria for facility selection based on product specific consideration, and regulatory, building code, and fire insurance requirements.

OPERATIONAL
- Site has an established system for selecting distributors who conform to specific training, compliance and materials handling requirements.

- Procedures address the risk management requirements for products manufactured on-site as well as toll or contractor manufactured products.
- Procedures are broadly communicated to existing distributors and allow for sufficient time to conform to established requirements.

RE-EVALUATING
- Internal or external audit of selection process used to discern effectiveness and support needed improvements.
- Facilities subject to selection criteria (including distributors, toll manufacturers, public or special purpose warehouses, terminals and transfer facilities) are solicited for input on appropriate modifications to selection criteria.

SECURITY AT DISTRIBUTION SITES (2.2)

Develop procedures that provide for an adequate level of security at distribution sites

Maintaining an appropriate level of security for transportation and distribution sites is a key consideration for managers. The physical boundaries of a facility, which include the perimeter of the property on which the facility is located and the walls of the buildings, are the most obvious starting points when evaluating security. Remember that site security has dual functions; the physical borders must not only keep unauthorized personnel out of the facility but also be designed in such a way to permit the safe and efficient entry of authorized persons and transport vehicles carrying hazardous materials.

Resources offered for consideration in this management practice provide a list of suggested questions to consider when attempting to evaluate the needs of your company with regard to public access to the property and the facilities. These questions are designed to help companies focus on the appropriate level of security that is warranted. If security is provided by a contractor, the contractor must be made aware of the hazardous materials used onsite and the appropriate emergency response procedures to be initiated in case of an incident on their watch.

It is critical to companies implementing Coatings Care® resource guidance to understand that there are potential hazards associated with the products moving through their distribution facilities and that a comprehensive program designed to assure security can greatly diminish some of those potential hazards. Coatings Care® provides an optional Code that contains more guidance on security.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Determine what level of site security would mitigate potential health, safety or environmental incidents including facility location (exposure), materials of construction, access points, staffing (including non-business hours), and local government support (police, fire, hazardous materials, emergency response, etc.).
- Assess the level of security associated with each existing distribution facility using the same criteria identified above.
- Review site security information and needs with management and obtain authority to implement procedures.

DEVELOPMENTAL
- Assign personnel to become familiar with site security issues and outline considerations for developing procedures to be followed when evaluating potential distribution facilities.

- Determine the best mechanism for communicating site security considerations to existing distribution facilities, including contract renewal dates and process, shipping document transmittals, and/or actual site visits or contacts with site personnel.

OPERATIONAL
- Site has an established set of criteria and has developed procedures for site security at distribution facilities, taking into account the specific risks associated with the products in distribution.
- Distribution site security requirements identified in contract documents.
- Procedures broadly communicated to existing distributors allowing for sufficient time to conform to established requirements.

RE-EVALUATING
- Distribution site security considerations integrated into the development of new products and processes.
- Contract distributors participate in peer leadership activities, and have in place a third-party assessment or certification program which demonstrates conformance with good management practices.

TRANSPORTATION AND DISTRIBUTION HAZARDS, COMMUNITY AND ENVIRONMENTAL RISKS (2.3)

Identify and evaluate, on a regular basis, potential hazards and associated risks to the community and the environment relative to transportation and distribution of coatings products

Transportation and distribution incidents can occur wherever and whenever you move products. The underlying cause of many of these incidents oftentimes is not under the direct control of the manufacturer, distributor or transporter. Proper training of personnel may minimize the likelihood of an incident, but can never eliminate all foreseeable causes. It is critical for companies implementing this management practice to begin to recognize, evaluate and control the risk of transportation and distribution incidents as a means of minimizing potential adverse health or environmental consequences. To do this it is necessary to understand: (1) the potential hazards associated with new and existing products being shipped; (2) the likelihood of accidents or incidents involving the product's transportation and distribution which could result in a release to the environment; and (3) the potential impact on communities of such releases.

Effective management of health and environmental risks can be achieved by having company personnel and contractors responsible for transportation and distribution develop an understanding of the product's potential hazards. The challenge associated with implementing this management practice is for your organization to adopt a consistent approach to ranking product hazards.

Developing some sense of the likelihood and severity of a transportation and distribution incident requires a detailed understanding of how products (of a given hazard) are to be shipped. For example, the likelihood of a motor freight incident increases with the volume of shipments, the number of trips, and the route distance. The severity of any incident can initially be characterized as one involving a "release" to the environment or one in which the product remains contained. Incidents involving releases need to be characterized in terms of their severity, first by size (ranging from small spills to the loss of the entire contents of a tank car) and second by the potential environmental impact, a ranking which must also take into account the potential hazard of the product.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

- Review regulatory requirements on risk assessment and management of transportation incidents.
- Obtain information useful to assessment of potential transportation incidents, including annual volume of shipments, number of trips, route distance, and environmental considerations of product formulation, carrier selection criteria, emergency response requirements, population density, and availability of material handling equipment.

DEVELOPMENTAL
- Personnel performing transportation and distribution activities have been formally assigned identified responsibilities.
- Information on past transportation and distribution incidents reviewed to determine useful considerations for ongoing program management.
- Management review of risk management efforts in transportation and distribution supports increased program development.

OPERATIONAL
- Procedure written and implemented for analysis of transportation and distribution hazards and risk reduction measures.
- Evaluations conducted for all transportation modes used, including rail, road, air, and water.

RE-EVALUATING
- Procedures for analysis periodically reviewed and revised to reflect new information.
- Risk management requirements for transportation and distribution integrated in the development of new products or processes.

PERFORMANCE MONITORING (2.4)

Develop procedures to monitor company performance in transportation and distribution activities, and use such information to prevent future incidents

The risks associated with transporting and distributing coatings and coatings-related materials illustrates that an internal system of recording and investigating accidents/incidents is important. Although every effort should be made to avoid and prevent the occurrence of such incidents, if one does occur, companies guided by Coatings Care® resources should use the experience to reevaluate policies and supporting procedures in the hope of reducing the risk of similar incidences in the future.

All transportation and distribution incidents should be thoroughly investigated. The investigation documentation should include questions regarding the package selection and preparation. In addition, questions regarding the handling and storage of the materials involved in the incident should also be answered. It may be helpful to trace the movement of the materials in question from the time they entered the transportation arena until the time of the incident. The goal is to gather appropriate data related to the incident, determine the probable cause, and then examine whether different or modified handling, storage, preparation, or container selection procedures could reduce the probability of a future similar incident.

Companies should be committed to continuously re-evaluating performance in all transportation and distribution activities, and take corrective action where needed, so as to minimize the risk of future incidents. Therefore, a company's daily operating procedures should include, where applicable, an evaluation of the performance of carriers and distribution centers, as well as a company's own storage and handling and preparation functions. This should be done every day, not merely when there has been some type of incident. Additional Coatings Care® resources may assist companies in assessing the performance of their carriers, and provides selecting criteria for distribution centers. Coatings Care® resources also direct companies to address internal transportation and distribution functions such as storage and handling, container failure, container selection and container preparation.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Identify facility personnel and contractors responsible for the transportation and distribution of paint and coatings products made or handled at the facility.
- Review applicable regulations which provide for performance measures on transportation and distribution activities including but not limited to potential impact of accidents/releases/incidents on health, safety and the environment.

DEVELOPMENTAL
- Regularly discuss with raw material suppliers the nature and extent of hazards and ways to mitigate potential impacts.
- Cause and effect of past incidents evaluated to determine mechanisms for reducing likelihood, magnitude of impact from any future incidents.

OPERATIONAL
- Hazard assessment system developed and implemented to monitor company performance in transportation and distribution activities, including recordkeeping requirements, (i.e., volume production, number of trips, route distance, environmental considerations, carrier selection, distribution facility selection, emergency response, population densities, materials handling equipment used, regulatory agency interaction/compliance).
- Performance monitoring procedures apply to all modes of transportation used.
- Procedures in place to provide feedback from customers, contractors and facility personnel critical to ongoing analysis of the effectiveness of company program.

RE-EVALUATING
- Procedures for analysis of performance periodically reviewed and revised to reflect new information.
- Performance improvement considerations for transportation and distribution activities integrated in the development of new products or processes.

CONTAINER/PACKAGE MANAGEMENT PROGRAM (2.5)

Develop a written procedure to address selection, use and management of containers that are suitable for their intended purpose

This management practice covers a wide range of packaging activities. "Selection, use and management of containers" means gathering the necessary data to choose a package that is appropriate for the product being shipped, one that complies with appropriate performance standards and certification requirements, and is free of leaks and visible defects. Diligent attention to details on the materials you transport and fastidious adherence to any applicable regulations are necessary to assure compliance and a safe, efficient transport. Once the package has been selected in accordance with the principles of this management practice, you are ready to fill the package and send it into the distribution cycle where it can be properly marked, labeled, placarded, and stored (as appropriate).

The type of package selected will depend upon many different factors, including the quantity of material being shipped, the hazardous nature and class of the material, and the method of shipment. The resources in this management practice helps to "decipher" any regulations for package selection.

Uniform and consistent application of these practices, along with adequate quality control of containers purchased, will ensure the greatest degree of protection for the material in transport and throughout

distribution. It is critical for companies relying on Coatings Care® resources to implement practices and procedures which will ensure the greatest degree of protection not only for the material in transportation but for the facility environment and the community at large.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Information on the hazards of all raw materials and/or products manufactured and/or stored at the facility available and in sufficient detail to determine required containers and handling considerations.
- Containers used for bulk or non-bulk storage or delivery as well as pre-packaged or sample containers should all be identified.

DEVELOPMENTAL
- Existing containers should be evaluated for their conformance with applicable regulations.
- Appropriate procedures for the selections of containers should take into account regulatory requirements, materials of construction, handling considerations (ergonomics) and potential for re-use.

OPERATIONAL
- Procedures in place to select, test, certify, and use suitable shipping containers to achieve regulatory compliance and address the product hazard, including considerations for the mode of shipment.
- Procedures should seek to identify a broad range of containers suitable for use and include appropriate construction specifications.
- Procedures for container selection should be audited for effectiveness in the event of any transportation or distribution incidents.
- Required re-testing should be performed by the responsible party

RE-EVALUATING
- Procedures for selection and management of containers periodically reviewed and revised to reflect new information.
- Container selection and management considerations for transportation and distribution activities integrated in the development of new products or processes.

STORAGE, SEGREGATION, PACKAGING AND MARKING (2.6)

Establish written procedures for the storage, segregation, packaging, and marking of coatings products

This management practice is designed to address specific activities that must be completed after a container or package is filled. Whether the package is prepared for shipment or placed into storage, there are specific actions that can be taken to ensure the package is properly handled and to achieve the greatest degree of safety. Although this management practice specifically refers to storage, segregation, packaging, and marking, it also includes additional activities such as labeling and placarding.

Just as package selection, use and management is highly regulated, so too are storage, segregation, packaging and marking activities. Several sections of regulations address the storage, segregation, handling, marking, labeling and placarding of filled packages and containers. Practically speaking, a simple system which automatically identifies the relevant product classification and hazard information and produces the instructions for marking, labeling and placarding is the goal of this management practice.

Companies should be firmly committed to transporting products in a safe and efficient manner. While compliance with prior management practices will help ensure proper package selection and management, these efforts will be in vain unless the proper storage, segregation, marking, labeling and placarding procedures are also instituted. This comprehensive approach to transporting goods will help your company achieve the health, safety, and environmental goals of Coatings Care®.

AWARENESS
- Obtain and review regulatory requirements for storage, packaging, and marking of paint and coatings products.
- Assemble available documentation on existing facility practices associated with storage, segregation, packaging and marking of coatings products.

DEVELOPMENTAL
- Assign personnel to develop procedures for storage, segregation, packaging, marking and placarding of paint and coatings products and provide additional information/training to support the effort where required.
- Co-ordinate development of procedures with all departments involved in shipping products to customers.
- Inform facility contractors involved in transportation and distribution of the need to conform to facility procedures.

OPERATIONAL
- Procedures written and implemented for the coatings products, storage, segregation packaging, marking (including bulk and non-bulk packaging) and required placarding.
- Procedures widely communicated to facility contractors including mechanism for periodic review of their conformance.
- Mechanism established to modify procedures when warranted as a result of a transportation or distribution incident.

RE-EVALUATING
- Adequacy of written procedures considered and appropriate modifications undertaken early in the development of new products or processes.
- Facility personnel participate in industry forums on transportation and distribution procedures development offering the opportunity to showcase efforts and provide peer leadership.

CARRIER PERFORMANCE

SELECTION OF CARRIERS (3.1)

Establish a policy and procedures for selecting carriers which consider safety performance, inspections and maintenance, and training of support staff

Carriers — the transport vehicles that physically move products from one location to another — are the heart and soul of the distribution network. Manufacturers of products must be aware that the distribution network is its link to the ultimate consumer. As such, manufacturers must assure that the distribution network acts responsibly with regard to health, safety and environmental considerations.

Carrier safety records, fleet inspection and maintenance, and the training of staff are all factors which contribute to overall performance. These factors can and should play a role in the selection process. For instance, manufacturers can easily review a carrier's safety performance by asking for a copy of any official safety rating. The actions necessary to obtain this kind of information should be incorporated into a written policy and procedures.

This management practice is intended to assist manufacturers by developing decision-making criteria from existing facility practices and essential health, safety and environmental considerations embodied in regulatory obligations. It is important to stress that ***this management practice seeks solely to provide guidance and resources for consideration in making carrier selection decisions. It is not intended to force a specific business practice.***

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Identify all modes of transportation used by the facility to move product to customers or distribution sites (including common, contract, private and customer-controlled carriers).
- Facility personnel assigned to select carriers familiar with regulatory requirements, insurance and other considerations impacting the selection process.
- Management supports the development and implementation of policies and procedures for the selection of carriers based on objective criteria.

DEVELOPMENTAL
- Responsible facility personnel seek to develop information on existing carriers, including programs for emergency response, employee training, permitting (including expiration dates), financial status, and employee assistance programs on controlled substance testing.
- Additional information used in carrier's continuous improvement programs integrated into selection programs.

OPERATIONAL
- Facility has established a formal documented program for carrier selection which takes into account data collected during audits of safety performance, data from previous records of performance, and any other site-specific criteria.
- Personnel assigned to carrier selection routinely make informed decisions, and regularly review qualified carriers' efforts to achieve continuous improvement.

RE-EVALUATING
- Procedures for carrier selection periodically reviewed and revised to reflect new information.
- Carrier selection for transportation and distribution activities integrated in the development of new products or processes.

CARRIER COMPLIANCE AND INSURANCE REQUIREMENTS (3.2)

Develop written procedures which require carriers to be properly insured and have all required government permits

Government permits help ensure that carriers comply with minimum health, safety and environmental concerns. Minimum insurance requirements give the shipper or consignee the added comfort of knowing that the carrier has sufficient financial means to make amends should an incident occur. Both of these factors are vital in maintaining a carrier network that adheres to the goals of Coatings Care®

This management practice offers a sample carrier selection policy that incorporates insurance requirements and financial status of the carrier as key elements.. While this policy also takes into consideration additional factors, keep in mind that your company may not require the same kind of information — each company will have its own specific needs to consider.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Facility personnel assigned to oversee carrier selection familiar with insurance requirements, availability of coverage, and liability limits.
- Regulations governing carrier permits reviewed and included in selection criteria.
- Management supports selection of carriers which have required government permits and meet established minimum insurance requirements.

DEVELOPMENTAL
- Considerations for verifying vehicle insurance include copy of policy indicating liability limits for personal injury and property damage, the original certificate naming the shipper as the insured or other document listing the shipper as an additional insured (in carrier policy).
- Evidence of required coverage for bulk shipping, and any necessary endorsements of environmental restoration and public liability provided.

OPERATIONAL
- Selected carriers' risk management efforts include appropriate level of risk control and risk financing (or qualify through insurance or alternative financial responsibility arrangement).
- Procedures for carrier selection require evidence of applicable government permits.

RE-EVALUATING
- Carrier permits verified through facility audits.
- Procedures for assuring carrier insurance and permits periodically reviewed for adequacy and amended as appropriate.

DISTRIBUTORS

DISTRIBUTOR EDUCATION (4.1)

Encourage and assist distributors in educating their employees on the safe storage and transportation of coatings products

Facilities that store and handle coatings and coatings-related materials are an integral part of the transportation and distribution network which moves coatings products to the ultimate consumer. Every juncture along the way has the potential to become the site of a hazardous materials incident. The risk of an incident is dramatically increased if distribution facilities do not train their employees adequately.

As handlers of hazardous materials, employees in distribution facilities require specific training in order to comply with the applicable federal, state and local regulations. Although such training is the responsibility of the distributor, a manufacturer of hazardous materials can and should offer its expertise in endeavors that will directly minimize the potential for an adverse incident involving their products, at any point in the distribution network.

This practice is designed to ensure that critical information and effective methods of training hazardous materials employees known to the manufacturers are also made available to distribution facilities. It is not intended to place additional training responsibilities on the manufacturer, but rather is designed to establish and maintain a communications network that extends from the manufacturer to its distributors, whether they are in-house or contract facilities.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Obtain information on the type of training distributors provide to their employees involved in the shipping, handling and transport of coatings products.
- For distributors handling products containing hazardous materials, review training program information to identify content specific to address regulatory requirements including health and safety (e.g. hazard communication, personal protective equipment, confined space entry), transportation, and environmental control (spill response, and hazardous waste operations).

DEVELOPMENTAL
- Provide contract distributors with information on the manufacturing facility's internal training program for health, safety, and environmental activities for their consideration in modifying their own programs to handle coatings products.
- Review the associated "Care" program of carrier's Trade Association and determine if contract distributors are participating in that program.
- Assign facility personnel to undertake verification of distributor training programs.

OPERATIONAL
- Facility has communicated need for specific employee training requirements to distributors handling coatings products.
- Where required, communication includes information on training necessary for compliance with regulations, including special handling provisions.
- Implementation of appropriate training for distribution employees handling coatings products verified for all points in distribution chain.

RE-EVALUATING
- Manufacturers and distributors participate in joint training program presentations aimed at enhancing understanding of respective roles and responsibilities.
- Facility procedures for selecting distribution sites take into account candidate's participation in third-party assessment programs to enhance performance in health, safety and environmental matters.

DISTRIBUTORS—INFORMATION REQUESTS (4.2)

Develop a procedure for responding to requests for information or assistance at any point in the distribution chain

Timely and efficient communication between distribution facilities and the manufacturer is an important factor in the safe storage and transport of coatings and coatings-related materials, many of which are hazardous. In order to operate in a safe and efficient manner, handlers of these materials, whether they are housed in contract facilities or in-house distribution facilities, must have access to the best and the most accurate data that is available.

When products are in the distribution chain, a timely and accurate response to a request for information about products or materials can assist in the safe storage and handling of the materials and minimize the adverse impact of an incident. Remember, the distribution chain encompasses a wide variety of handlers, and some may not be knowledgeable about the potentially hazardous nature of coatings and coatings-related materials. Having a formal procedure for responding to such requests provides immediate access to such information for all handlers.

This management practice is designed to help Coatings Care® companies develop and implement a formal procedure for responding to requests for information about materials and products, whether the request is from a contract distributor or a retail store that sells to painting and decorating contractors.

AWARENESS
- Employees responding to requests for information on products in commerce are identified and made aware of the need to address the requirements of the Transportation and Distribution Code.
- Document existing mechanisms for all communications regarding products (written and telecommunications) and identify information used in responding to specific requests.
- In the event a contractor (e.g. poison control center) is used to respond to some or all information requests, the adequacy of the contractor's efforts must be evaluated in the same manner as if it were an internal response.

DEVELOPMENTAL
- Develop an internal workshop/training exercise to review sample information requests and determine the adequacy of existing response efforts, making appropriate modifications. Where feasible, such a training exercise should be based on actual product distribution incidents.
- Review results of workshop with management and obtain support for any identified modifications.
- Identify others in the facility that would benefit from being informed of any request for information.

OPERATIONAL
- Procedures for both internal and contractor responses to information requests are written and implemented and allow for direct input from responsible parties and enhanced communication efforts.
- Information requests documented in writing and retained for an appropriate period of time to facilitate internal use in training, management reporting and program enhancement.
- Procedures written and implemented for those information requests warranting follow-up.

RE-EVALUATING
- Periodic internal audits of facility response to representative information requests undertaken with results reviewed by management and appropriate procedural modifications undertaken.
- Information developed on new products and processes takes into account identified communication needs.

EMERGENCY RESPONSE

EMERGENCY RESPONSE PLANNING (5.1)

Develop and maintain a transportation emergency response plan

Paint and coatings manufacturers need to be prepared to provide practical and technical information in the event of a transportation accident or emergency involving their products. The very minimum level of response requires that all companies have the ability to get a Safety Data Sheet (SDS) to the scene of an accident at any time of day or night. Therefore, it is important to develop an organized approach which involves your own company as well as representatives from the commercial carriers you are using to transport your products. The carriers will provide the initial response when involved in a transportation incident. Their knowledge and understanding and your ability to provide the relevant information about your products, raw materials or finished goods, is essential for controlling risks.

This management practice focuses on developing a Transportation Emergency Response Plan — a coordinated response which outlines appropriate and required activities for your company to undertake. Because the circumstances that give rise to hazardous materials incidents vary widely, it is impossible to establish strict guidelines. Rather, it is the goal of this management practice to prepare companies to engage in specific response activities immediately so as to initiate the appropriate rescue and containment efforts in every case, regardless of the nature of the released element. Community leaders that understand the coatings industry, its products, and its approach to transportation emergency response will be better able to deal with an incident.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Develop familiarity with the regulatory requirements associated with hazardous materials incidents in transportation emergencies, including required training, reporting and recordkeeping.
- Identify personnel or contractors responsible for coordinating company response to transportation emergencies and determine the extent of existing practices, including qualification and experience of response personnel, training, emergency information resources, and communication procedures.
- Review the requirements for a transportation emergency response plan with management and obtain the necessary support for its development.

DEVELOPMENTAL
- Develop and/or document effective existing facility practices and resources used in responding to transportation emergencies including but not limited to organization (initial notification/response procedures and access telephone numbers for key response personnel, contractors), personnel training (training on key emergency response requirements, including where required hazardous materials emergency response training), specific incident responses (for transportation emergencies requiring local area evacuation, fire-fighting, spill response, cleanup and emergency transportation), and communication (internal organization for communicating with emergency response personnel from local responders, regulatory officials, and contractors).
- Review available information on past transportation incidents to determine most effective procedure for fostering continuous improvement. Internal review team should include representatives from management, emergency response personnel, and public/customer relations.

OPERATIONAL
- Written plan for all identified (potential) transportation accident/incident responses developed, implemented, and regularly updated.
- Written plan and required follow-up training conforms to all regulatory requirements.
- All assigned response personnel trained on notification requirements, roles and responsibilities, and any necessary follow-up.
- Management involved in periodic review of program to evaluate its effectiveness and ability to meet regulatory requirements.

RE-EVALUATING
- Periodic external audits of facility response to transportation incidents undertaken with results reviewed by management and appropriate procedural modifications undertaken.
- Information developed on new products and processes takes into account identified transportation emergency response needs.

Establish procedures to provide support to local emergency response personnel in the event of a transportation incident

Paint and coatings shippers should be prepared to provide technical advice to emergency response agencies in the event of an accident or emergency involving their products. This management practice requires that the emergency response information is accessible to emergency responders in the event of an incident or accident. Companies relying on Coatings Care® resources recognize that this information must be available in advance of an incident for planning purposes, as well as readily available at the time of an incident.

In addition, a dialogue with the public should be established and maintained. One thing is certain: a community that has been briefed and engaged in dialog with paint and coatings manufacturers and shippers will have a better understanding of the requirements for any incident response and mitigation effort. Although this management practice discusses media relations, most community outreach efforts associated with emergency response are addressed in the Community Responsibility Code of Coatings Care®.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Develop familiarity with the information requirements for working with local emergency response personnel as described in applicable regulations and guidance documents, produced or distributed by such agencies as environmental protection authorities and local departments of health and/or local fire departments.
- Contact other community-based organizations at key company-owned transportation and distribution facilities (schools, local hospitals, police, and media, including, radio, TV and press).
- Inform facility personnel responsible for preparing and maintaining Safety Data Sheet (SDS) and reporting under regulatory permits to alert them to the potential need to make information available to local emergency response organizations.

DEVELOPMENTAL
- Identify local emergency response authorities for key facility distribution centers (including shipping terminals and warehouses) and assign personnel to determine necessary communication contacts and any specific information and support needs.
- Have management review the information developed to assist local emergency response personnel and obtain necessary support for continued implementation.

OPERATIONAL
- Written plan for supporting and responding to local emergency response efforts completed and implemented at the facility level.
- Written plan covers all transportation modes used and is specific for documented routes, including identification of specific contacts.

RE-EVALUATING
- Facility offers local authorities an exchange of information on potential transportation incidents to support planning and improve coordinated local response.
- Periodic exchange of facility and local response organization training materials and response program modifications.

Community Responsibility
Code Overview

I.   Purpose

The Community Responsibility Code has two major elements. The first element seeks to help protect employees and communities by assuring that each coatings manufacturing facility has an established program coordinated with local authorities, to respond to facility emergencies.

The second element assists companies in establishing and maintaining community outreach efforts that communicate relevant information and respond to questions and concerns regarding health, safety and the environment.

II.   Management Practices

EMERGENCY RESPONSE

EMERGENCY RESPONSE COMMUNICATION (1.1)

Prepare a written emergency response plan (ERP) for each operating site

Many regulations require operating sites to maintain a current Contingency Plan or Emergency Response Plan. These plans, which are often combined into one emergency response plan, traditionally cover the "operational" aspects of responding to an emergency on site. Critical operational elements covered under typical emergency response plans include:

- Emergency site evacuation plans
- Fire response procedures
- Chemical spill procedures
- Hazardous waste spill procedures
- First aid
- Personal protective equipment
- Emergency communications

It is essential that companies plan a response to emergencies in advance. By following a plan during emergencies, your company's communication staff can provide concise, accurate, and timely information to the appropriate stakeholders. Providing good information also allows emergency personnel to quickly assess the situation and respond accordingly. The plan should address:

- The risks to employees and the community from emergencies;
- The appropriate response for each scenario;
- Consultation with the emergency services;
- Procedures for external communications;
- Exercises to test plans;
- Liaison with other local facilities;
- Participation in a 24 hour response scheme for products.

Finally, a good plan may allow a company to avoid unfair criticism from the media and community.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review existing emergency response plans for site.
- Review emergency situations or obtain published information on industry emergency response efforts.
- Review emerging requirements contained in current and developing legislation and any local requirements which may apply to emergency response efforts.
- Assess the adequacy of current personnel training and available emergency response equipment.

DEVELOPMENTAL
- Establish a site team to develop a training exercise for the Emergency Response plan.
- Have the site team develop any required enhancements to the Emergency Response plan.
- Develop procedures and criteria for evaluating the Emergency Response plan and facility efforts to implement the plan.

OPERATIONAL
- Written Emergency Response plan complete and exercises conducted as often as required by local, state, or federal regulations.
- Exercises developed, implemented and evaluated by site team.
- Site team and all Emergency Response plan respondents meet periodically to get constructive feedback for plan evaluation.
- Plans modified in accordance with procedures and based on exercise feedback.
- All plan respondents have required training and are involved in evaluating Emergency Response equipment.

RE-EVALUATING
- Require personnel from other sites or possibly other facilities to assist on exercise evaluation and feedback.
- Management involved in exercise evaluations.
- Exchange information on site Emergency Response plans with other facilities and ask for critical review and input.

EMERGENCY EVACUATION PLAN (1.2)

Prepare a site evacuation plan to be followed in the event of an emergency

Employer, visitor and contractor safety takes precedence in an emergency. The first few moments of an emergency are critical. During this time, the situation must be identified and assessed, the need to evacuate evaluated, and an employee evacuation alarm activated (if necessary). An effective plan will address these three steps and also provide training to employees with the goal of evacuating employees, visitors and contractors from hazardous areas during an emergency.

In many cases, an evacuation plan is one aspect of an overall emergency response/action plan. This should include:
- The need for an appropriate alarm system;
- Identification of those in control during an emergency;
- Procedures during an emergency;
- Training exercises.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Review existing site evacuation plans.
- Make a list of all situations which might require an emergency site evacuation.
- Review appropriate regulatory requirements.

DEVELOPMENTAL
- Review situations which may cause a site evacuation and ensure the evacuation procedure takes into account building construction access, and any prevailing conditions.
- Require the site emergency evacuation plan to cover all situations which could institute an emergency evacuation.
- Establish critical performance criteria for the plan implementation, and develop measures to evaluate effectiveness following its activation.
- Communicate evacuation plan to employees.

OPERATIONAL
- Site emergency evacuation plan written and implemented.
- Evacuation plan evaluated by periodic drills/training exercises with critical performance criteria identified to evaluate effectiveness.

RE-EVALUATING
- Hold periodic meetings of employees to discuss evacuation exercise results and incorporate applicable changes into the plan.
- Review and evaluate critical performance criteria statistics; modify plan as appropriate.

EMPLOYEE EDUCATION AND TRAINING

EMPLOYEE EMERGENCY TRAINING (2.1)

Initiate an appropriate training program for facility personnel involved in any emergency response effort detailed in the emergency response plan

The Community Responsibility Code of Coatings Care® aims to protect employees and communities by assuring each coatings manufacturing facility establishes an emergency response program coordinated with local authorities to initiate and maintain community outreach efforts. One of the most critical factors in achieving these goals is employee and management education and training. Without a well-trained and experienced workforce, an organization may struggle to respond to emergency situations.

Training for the emergency response program can be divided into two unique categories:

- Regulatory-driven training for operational (production) personnel to react to facility emergencies like fires, spills, etc.
- Training for communications staff to discuss emergency response with key stakeholders.

This practice focuses on developing and assessing a training program for emergency response personnel.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

- Review existing emergency response training efforts.
- Identify key personnel involved in any and all emergency response, and review their training record.
- Review all applicable local regulations on emergency response training.

DEVELOPMENTAL
- Develop a program to train all personnel (at all levels) involved with efforts under the emergency response plan.
- Establish critical performance criteria for data collection which will reflect the desired outcome of the training program, indicate problems, and suggest necessary enhancements.

OPERATIONAL
- Emergency response training program written and implemented.
- Employees solicited for feedback on effectiveness of training effort.
- Collect and track critical performance criteria statistics.

RE-EVALUATING
- Review and evaluate the critical performance criteria statistics and modify the training program as appropriate.
- Management involved in program evaluations.
- Site participates in industry forum on training programs.

EMPLOYEE EDUCATION AND INPUT (2.2)

Provide a forum for employee input on health, safety and environmental issues of importance to the community

Employee input on health, safety and environmental (HSE) issues that effect the work environment or the community can be very valuable. Since many employees are likely to live in the surrounding community, they may be sensitive to community concerns that have potential impact on the company. Employers would be well served to tap this information source.

Employee behavior and attitudes while away from work may directly affect a company's reputation in the community. Providing a forum for employees to air their grievances, identify concerns, and offer suggestions will likely make employees feel like a valued member of the organization. Ultimately, employees will have pride in their work and the company, which may be reflected in their conduct away from work.

Due to the importance of employees having knowledge of HSE issues, some of the suggestions mentioned in the management practices of other codes and are meant to provide guidance on fostering the communication between employee and employer, rather than provide a detailed list of HSE information important to employees. Information resources offered in this management practice may also work in conjunction with any training of employees on HSE issues. Both employers and employees can use employee feedback to improve the training process.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Obtain and review applicable local, state, and federal regulations on employee/employer responsibilities in health, safety and environmental (HSE) compliance.

- Inform employees of Coatings Care® and company interest in establishing a forum for employee input on HSE issues.

DEVELOPMENTAL
- Write a company policy encouraging employee input on HSE issues.
- Develop procedures to allow an appropriate forum for employee input.
- Develop mechanism for instituting and tracking changes recommended by employees.
- Develop awards for employee input which result in significant improvements or savings.
- Develop critical performance criteria which will indicate effectiveness of the program.

OPERATIONAL
- Appropriate forum established for employee input including:
  - Statement of company interest and intent for employee participation
  - Management support for participation in program
  - Acknowledgement of employee input, including appropriate follow up
- Track critical performance criteria on program effectiveness.

RE-EVALUATING
- Review and evaluate critical performance criteria statistics; implement changes as appropriate.
- Institute an award program to encourage employee input.
- Share significant aspects of program with others in the industry through appropriate forum.

HEALTH, SAFETY AND ENVIRONMENTAL COMMUNICATIONS (2.3)

Train key facility personnel who communicate with employees and the public (including the media) regarding health, safety and environmental matters

Key facility personnel who are well trained in communicating health, safety, and environmental (HSE) information are vital — not only when an emergency occurs, but as part of the daily safe operation of the facility. Knowing who to talk to, what to say, and when to say it can prevent an emergency from occurring or prevent a disastrous outcome if an emergency occurs.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Identify key personnel who have responsibility for contact with employees, the public and the media, to determine whether their existing training is sufficient preparation for communicating on health, safety and environmental (HSE) matters.
- Review existing procedures and past practices associated with internal and external communication and determine areas for improvement or clarification.

DEVELOPMENTAL
- Develop a program to train all key personnel on communication skills.
- Establish critical performance criteria for training program which will reflect training goals and programs, and measure interim accomplishments.
- Communicate chain of command for external communications, including response to all employees.

OPERATIONAL
- Written training program developed and implemented.
- Program established for employee feedback or effectiveness of training.
- Collect, track and analyze critical performance criteria statistics.

- Training program modified as appropriate, on the basis of review and evaluation of critical performance criteria statistics.
- Solicit management involvement in program evaluation.
- Personnel involved in internal/external communications are aware of and involved in available Industry Outreach Programs.

COMMUNITY LIAISON

INFORMING GOVERNMENT AND BUSINESSES (3.1)

Inform local government officials and other businesses in the community about the facility, including the emergency response and site evacuation plans

As common practice, companies are encouraged (and, in some cases, required by law) to keep local officials, public facilities and businesses apprised of their emergency response and site evacuation plans. Beyond providing this basic health, safety, and environmental (HSE) information, maintaining open communication with local officials and businesses in the community is often advantageous.

The following activities are associated with different levels of conformance and can be used to undertake a self-assessment:

AWARENESS
- Develop and/or document effective existing facility practices for emergency response planning, including organization (initial notification/response procedures and access telephone numbers for key response personnel, contractors), personnel training (training on key emergency response requirements, including hazardous materials emergency response training, and specific incident responses for transportation emergencies requiring local area evacuation, fire fighting, spill response and cleanup, and other emergency/medical response, communication (internal organization for communicating with emergency response personnel, including local responders, regulatory officials, and contractors).
- Develop familiarity with the information requirements for working with local emergency response personnel as described in applicable regulations and any guidance documents produced or distributed by the local Department of Transport, environmental protection authorities, local departments of health, local Environmental Protection Authority, and/or local fire departments.
- Assemble available information on the facility itself including site plans, building plans, equipment, raw materials storage, process or production flow diagrams, shipping or loading dock locations and local/community transportation routes. In addition, develop a summary of facility tax and employment records, and community support programs/sponsorships.

DEVELOPMENTAL
- Contact other community-based organizations at key company-owned or operated facilities (i.e. schools, local hospitals, police, and media (radio, TV and print), to determine their needs for information about the facility.
- Identify local emergency response authorities for key company-owned or operated facilities (including manufacturing plants, shipping terminals and warehouses) and assign personnel to determine necessary communication contacts and any specific information and support needs.

OPERATIONAL
- Formal written process established for communicating with local authorities and providing specific information on company-owned or operated facilities.

- Open dialogue exists between facility personnel and local authorities enhancing understanding of operations, community support and emergency preparedness.

RE-EVALUATING
- Facility offers local authorities an exchange of information on potential emergency response incidents to support planning and improve coordinated local response.
- Periodic exchange of facility and local response organization training materials and response program modifications.

COMMUNITY OUTREACH (3.2)

Establish a process for interested persons to become more informed about the facility and its safety procedures and requirements.

Initiating community outreach efforts that communicate a company's health, safety and environmental policies and procedures can establish goodwill within the community. The scope of a company's community outreach efforts may depend on the size of the organization, the nature of the business, and the resources available. The development of outreach activities may be a group or individual effort. Management support is critical.

It is important to note that it is nearly impossible for a company to establish goodwill during an emergency. In an emergency, a company's attention is usually focused on mitigating the dangerous or potentially hazardous situation, providing support to emergency responders and accounting for all employees. Goodwill that has been established over time can be a valuable asset during an emergency and can earn the respect and trust of the community.

The following activities are associated with different levels of conformance and can be used tom undertake a self-assessment:

AWARENESS
- Assign key personnel to respond to requests for information on facility operations.
- Assemble documentation necessary to develop an understanding of facility operations and potential impact on local community.
- Obtain management support for building an effective response to requests for information.

DEVELOPMENTAL
- Assemble a team of employees to develop a profile of potential information needs of the community including product/manufacturing-related questions or concerns; potential HSE impacts; community support and service projects; and employment history/economic benefits.
- Determine best available response mechanisms, including telephone communication, site visits/tours, written information, and attendance/participation at local functions (town meetings, school lectures, civic organizations, etc.) and other opportunities.

OPERATIONAL
- Formal program for responding to public requests for information written and implemented with dialogue focusing on continued public confidence and knowledge of the industry.
- Site program incorporates information available from Trade Associations through Industry Outreach Programs.
- Facility sponsors periodic tours for local officials and other interested parties, and offers presentations on facility and industry activities at local schools and other sites by facility personnel.

- Facility offers local authorities advance information on production planning in an effort to secure improved co-ordination of effort and adequate local emergency response.
- Periodic opportunities for exchange of information between facility and local authorities covered by local media and widely reported to community.

OPTIONAL COMMUNITY RESPONSIBILITY CODE CONTENT

SOCIAL ACCOUNTABILITY

INTRODUCTION

The goals of the Community Responsibility – Social Accountability Management Practices are to ensure that employees are treated fairly. They require that a company develops, maintains and enforces policies and procedures that avoid child and forced labour, allow freedom of association and employee representation, avoid discrimination, and ensure reasonable working hours and remuneration. Actions contemplated under this Code may already be addressed by national labor laws.

This Guidance provides general Management Practices and a simple self-assessment process to encourage good practice in Social Accountability.   It is based on the requirements of SA 8000, the Social Accountability standard produced by Social Accountability International.

MANAGEMENT PRACTICES for SOCIAL ACCOUNTABILITY

Adopt policies to define fair working hours and related remuneration (4.1)

Awareness

- Be aware of and comply with national legislation on working hours
- Be aware of and comply with any legal or industry standard setting a minimum wage
- Compliance with national legislation may mean that a company is already fulfilling the requirements of this Management Practice

Development
- Develop policies to ensure that:
  - Working hours are fair
  - Employees are provided at least one day off in every seven-day period
  - Employees are compensated for overtime
  - Unless agreed with employees, overtime is voluntary
- Develop policies to ensure that:
  - Wages always meet at least the legal or industry minimum standards
  - Deductions are not made for disciplinary purposes
  - Wages and benefit statements are clearly detailed and issued regularly
  - Labour–only contracting arrangements and false apprenticeships are not undertaken in an effort to avoid obligations under labour or social security legislation

Operational
- Implement procedures for fair working hours and remuneration as above
- Establish a management system to ensure compliance

Re-Evaluation
- Review management system to track and, where necessary, seek improvement

Adopt policies that avoid the use or support of child or forced labor (4.2)

Awareness
- Be aware of, and comply with, any legal or industry standard concerning the use of child or forced labour
- Compliance with national legislation may mean that a company is already fulfilling the requirements of this Management Practice

Developmental
- Develop policies to:
  - ensure that child or forced labour is not used by the company
  - ensure that child or forced labour is not used by suppliers to the company as far as is practicable
  - ensure that , as far as practicable, product is not supplied to customers that use child or forced labor

Operational
- Put procedures in place to enact the above policies

Re-Evaluation
- Review policies and procedures where necessary

Adopt policies that avoid discrimination and unfair disciplinary practices and allow freedom of association and employee representation (4.3)

Awareness
- Be aware of, and comply with, any legal or industry standard concerning freedom of association and employee representation
- Compliance with national legislation may mean that a company is already fulfilling the requirements of this Management Practice

Development
- Develop policies to:
  - Ensure that employees are allowed freedom of association and employee representation and that the company does not discriminate based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, pregnancy or age
  - Prevent behaviour, including gestures, language and physical contact, that is sexually, or otherwise coercive, threatening, abusive or exploitive
- Develop policies to ensure that the company does not engage in, or support, the use of corporal punishment, mental or physical coercion, and verbal abuse

Operational
- Put procedures in place to enact the above policies

Re-Evaluation
- Review policies and procedures where necessary

Security
Code Overview

I.   Purpose

The Security Code under Coatings Care® seeks to assist companies in their efforts to conduct their day-to-day plant operations in a manner that is consistent with established health, safety, security and environmental practices. The goal of the Security Code is to assist a company in developing an effective management system for addressing security issues, including the regulatory requirements and related operational considerations that define a comprehensive security program. The resources contained herein reflect established management approaches currently used by the industry.

The code is designed to help companies achieve continuous improvement in security performance using a risk-based approach to identify, assess, and address vulnerabilities as needed. The code is also designed to assist companies in preventing or mitigating incidents, enhancing training and response capabilities and maintaining and improving relationships with key stakeholders. Not all facilities share the same risk of security threats/incidents, particularly terrorists threats/incidents. Thus, the degree to which different management practices under the Security Code are implemented may vary greatly depending upon the company or site. The initial resource provided in the Security Code – Analyses of Threats, Vulnerabilities and Consequences – presents companies with tools that can be used to determine the applicability and subsequent consideration of the remaining management practices in the Security Code. Therefore, the evaluation is designed to be used by a company or facility as a starting point to determine the appropriate applicability of the rest of the Security Code to that site. In addition, the management practices in the code will be implemented with the understanding that security is a shared responsibility requiring actions by others such as customers, suppliers, service providers and government agencies.

Furthermore, this code was created with the knowledge that paint and coatings companies have invested considerable resources in their current programs. As a practical matter, the resources contained herein are intended to complement and support your current approach for addressing health, safety, and environmental responsibilities.

II.   Management Practices

An individual company's consideration of the Security Code of Coatings Care® will require a visible commitment by all levels of management. This commitment should be reflected in published policies, evident in the established accountability, and supported with sufficient resources.

Specifically, establishing an effective and ongoing security management program following Coatings Care® resources requires, as a minimum, that each company evaluate each of the management practices contained in the Security Code that apply to their operations. In detailing the suggested activities and other resource materials for this Code, some degree of overlap between the management practices has resulted in the management practices. Several critical activates are repeated periodically to emphasize their importance. Any redundancies or overlap identified in the suggested activities can be mitigated by careful documentation of progress made during the assessment.

The Security Code complements and is designed to be implemented in conjunction with the other Coatings Care® management practices that demonstrate the industry's commitment to protecting employees and society. Existing management practices that enhance community responsibility, emergency preparedness, pollution prevention, process safety, employee health and safety, product distribution and product stewardship often relate to security. Companies should regularly reassess those security related practices in the spirit of continuous evaluation and improvement.

ANALYSIS OF THREATS, VULNERABILITIES AND CONSEQUENCES (1.0)

Prioritize and periodically analyze potential security threats, vulnerabilities and consequences using accepted methodologies

Using generally accepted tools and methods, companies will conduct analyses to identify how to further enhance security. This process will be applied at operating facilities using appropriate vulnerability assessment methodology. Security of product sales, distribution and cyber security should also be analyzed using appropriate methodology. These initial analyses will be conducted on an aggressive schedule then conducted periodically thereafter.

IMPLEMENTATION OF SECURITY MEASURES (2.0)

Develop and implement security measures commensurate with risks, and take into account inherently safer approaches to process design, engineering and administrative controls, and prevention and mitigation measures

Companies will take action when they identify and assess potential security risks. Actions can include putting additional or different security measures into place to provide greater protections for people, property, products, processes, information and information systems. At facilities, actions can include measures such as installation of new physical barriers, modified production processes or materials substitution. In product sales and distribution, actions can include measures such as new procedures to protect Internet commerce or additional screening of transportation providers.

INFORMATION AND CYBER-SECURITY (3.0)

Recognize that protecting information and information systems is a critical component of a sound security management system

Companies will apply the security practices identified in this code to their cyber assets as well as their physical assets. Information networks and systems are as critical to a company's success as its manufacturing and distribution systems. Special consideration will be given to systems that support e-commerce, business management, telecommunications and process controls. Actions can include additional intrusion detection and access controls for voice and data networks, verification of information security practices applied by digitally-connected business partners, and new controls on access to digital process control systems at our facilities.

DOCUMENTATION (4.0)

Document security management programs, processes and procedures

To sustain a consistent and reliable security program over time, companies will document the key elements of their program. Consistency and reliability will translate into a more secure workplace and community.

TRAINING, DRILLS AND GUIDANCE (5.0)

Training, drills and guidance for employees, contractors, service providers, value chain partners and others, as appropriate, to enhance awareness and capability

As effective security programs evolve, companies will keep pace by enhancing security awareness and capabilities through training, drills and guidance. This commitment extends beyond employees and

contractors to include others, when appropriate, such as product distributors or emergency response agencies. Working together in this fashion improves ability to deter and detect incidents while overall security capability.

COMMUNICATIONS, DIALOGUE AND INFORMATION EXCHANGE (6.0)

Communications, dialogue and information exchange on appropriate security issues with stakeholders such as employees, contractors, communities, customers, suppliers, service providers and government agencies balanced with safeguards for sensitive information

Communication is a key element to improving security. Maintaining open and effective lines of communication includes steps such as sharing effective security practices with others throughout industry and maintaining interaction with law enforcement officials. At the same time, companies understand that their role is to protect employees and communities where they operate, while safeguarding information that would pose a threat in the wrong hands.

RESPONSE TO SECURITY THREATS (7.0)

Evaluate response, reporting and communication of security threats as appropriate

Companies take physical and cyber-security threats very seriously. In the event of such threats, companies promptly will evaluate the situation and respond. Real and credible threats will be reported and communicated to company and law enforcement personnel as appropriate

Companies should have a standard baseline of security measures in place. When a certain threat level is reached or indicated additional pre-determined security measures would be added to the baseline measures.

RESPONSE TO SECURITY INCIDENTS (8.0)

Evaluate response, investigation, reporting, communication and corrective action for security incidents

Companies should be vigilant in efforts to deter and detect any security incident. If an incident should occur companies should promptly respond and involve government agencies as appropriate. After investigating the incident, the member company should incorporate key learnings into its security practices and implement necessary corrective actions. As appropriate, lessons learned from an incident should be shared with others in industry and government agencies.

SECURITY REQUIREMENTS FOR HAZARDOUS MATERIALS TRANSPORTATION (9.0)

Develop and implement a hazardous materials transportation security plan and associated security awareness training

Regulations require facilities to enhance the security of hazardous materials transported in commerce. Shippers of certain highly hazardous materials and shipments of hazardous materials that require placarding must develop and implement security plans. In addition, all shippers of hazardous materials must assure that their employee training includes a security component.

Indicators of Performance

Companies that have made a strong commitment to effectively manage their health, safety and environmental responsibilities often express an interest in "benchmarking" their performance with other comparable progressive companies. In an effort to facilitate such comparisons, the International Paint and Printing Ink Council (IPPIC) has established a consensus set of Coatings Care® "Indicators of Performance" that are currently being used around the world by paint and printing ink trade associations to track industry progress over time and facilitate benchmarking activities.

Reference data	Units
Total number of sites covered	Number
Total number of employees for all sites	Number
Total number of hours worked per year (employees + contractors)	Hours/year
Total Production for all sites (in tons per year)	Tons/year

Core Parameters	
Indicator No. 1 - Total amount of waste	Tons/year
Indicator No. 2 - Consumption/Use of Volatile Organic Compound (VOC)	Tons/year
Indicator No. 3 - Annual electricity consumption	MWh/year
Indicator No. 4 - Annual gas and oil consumption	GJ/year

Calculated Indicators of Performance	
Total waste per Total Production (Indicator No. 1/Total Production results in Kg/Ton)	
VOC Consumption per Total Production (Indicator No. 2/Total Production results in Kg/Ton)	
Electricity Consumption per Total Production (Indicator No. 3/Total Production results in MWh/Ton)	
Gas & Oil Consumption per Total Production (Indicator No. 4/ Total Production results in GJ/Ton)	

Information on global implementation of Coatings Care by paint and ink associations is available at the IPPIC web site (www.ippic.org). Links to individual national association sites provide some data on

Associations are encouraged to consider collecting data on the IPPIC's consensus indicators of performance to establish a trend line and identify areas for possible improvements.