Level 2, 263 Mary Street
Richmond VIC 3121
www.pacia.org.au
Ph : (03) 9429 0670
Fax : (03) 9429 0690

A PUBLIC COMMITMENT

Plastics and Chemicals Industries Association

CODE OF PRACTICE

Storage and Transport Safety

STORAGE AND TRANSPORT SAFETY

INTRODUCTION

Purpose

This Code governs PACIA member company actions regarding storage and transport consistent with the Guiding Principles of the Responsible Care commitment, in particular which state:

"In consultation with our stakeholders we will manage all our activities to ensure preservation of environment, protection of the health and safety of our employees and the community, and a standard of performance the public has a right to expect".

"We will communicate with our local and broader communities about our activities and our products and listen and respond to their concerns. We will inform them and other interested stakeholders of our health, safety and environmental performance".

In general, the implementation of this Code involves setting management plans and objectives, carrying out hazard evaluations, implementing risk reduction programs, prompt and effective emergency response and supporting a community awareness programme. With these in place, the member companies and PACIA will be able to quantitatively measure performance on safety associated with storage and transport activities.

It should be noted that many companies have tailored quality, environment and safety systems such as ISO 9001 and ISO 14001. Implementing equivalent elements from those systems would meet the requirements of this Code of Practice. Where a company does not have a recognised management system, this Code of Practice provides guidance for sound Responsible Care practices. Implementation of management practice equivalent to the examples given with appropriate evidence of actions to achieve compliance with the Policy intent is acceptable.

Scope

The Code covers all operations that chemicals undergo before and after manufacture and before ultimate use. For the purpose of this Code, "Storage" covers both bulk and packaged chemicals and includes the handling, re-packing, care, custody and pipeline transfer of chemicals. Similarly "Transport" covers all aspects of transportation of chemical raw materials and chemical products, including wastes; by all alternative modes, including road, rail, air and sea freight. This code covers all facilities and services whether owned/operated by or contracted to the member company.

This Code interfaces with a number of the other Responsible Care Codes of Practice, in particular Product Stewardship, Manufacturing Process Safety and Employee Health and Safety. Reference is also made to the PACIA Carrier Accreditation Scheme with its Self Assessment Check List. This aims to assist member companies to meet the requirements for regular review/audit of transport contractors under this Code; and to optimise the external audit workload for Carriers. Where appropriate, the requirements for Control of Major Hazard Facilities should be considered, while benefit would also be gained from reference to other PACIA publications on specific high hazard materials, such as acrylonitrile, hydrofluoric acid and sodium cyanide.

Philosophy

Member companies recognise the risks involved in the Storage and Transport of chemicals and, through this Code, aim to achieve the following:

- Progressive Improvement in Health and Safety and reduction of incidents which can result in injury to people and to the environment during the Storage and Transport cycle;
- Effective emergency response which minimises harm to people and damage to the environment;
- Assurance that the management systems necessary for responsible Storage and Transport activities are in place and are functioning effectively;
- Co-operation with the storage and transport industry in reducing risks associated with their operations.
- Public, employee and contractor confidence in the Storage and Transport of chemicals and chemical products.

Chemicals and chemical products will not be presented for storage and transport unless they are :

- suitably and securely packaged to safely withstand the rigours of handling
- labelled to advise employees, transporters, emergency services and consignees of all of the hazards that may present during storage and transport
- are properly described in consignment documentation to enable the storage and transport functions to be carried out safely.

Each member company will also work actively, alone or through selected organisations (e.g. PACIA Committees), and, if possible, in consultation with other stakeholders, to assist governments in developing public policies, legislation and regulations governing the Storage and Transport of chemicals.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
1 COMMITMENT AND LEADERSHIP		
1.1 Policy Storage and Transport shall be subject to the same level of policy commitment to health, safety and environmental protection (HSE) as other areas of operation. Its implementation shall require senior management leadership through individual commitment, active participation, publishing of written policies and effective communication. Policies and standards shall meet or exceed all legal requirements in letter and in spirit.	1.1 (a)	Storage and Transport (S&T) operations are understood to be included in published policy making a commitment to Health, Safety and Environmental protection (HSE)
	(b)	CEO and senior management in S&T operations demonstrate their commitment to HSE by effective communications and participation, including review at regular senior management meetings.
	(c)	Policy statements committed to storage and transport standards will meet or exceed all legal requirements in letter and in spirit.
1.2 Accountability Commensurate with risk, specific goals and responsibilities for meeting the requirements of this Code shall be established throughout relevant parts of the organisation.	1.2 (a)	Job descriptions (or equivalent) include responsibilities for HSE programs throughout the S&T area.
	(b)	Appraisal systems and rewards reflect the level of commitment to these responsibilities.
1.3 Resources Each company shall commit the appropriate financial, time and human resources necessary to implement, maintain continually improve HSE performance in storage and transport. Line functions shall be properly supported by qualified or experienced HSE professionals and technical experts.	1.3 (a)	Senior management in S&T regularly review, provide and document the resources necessary to establish and maintain S&T HSE programs.
	(b)	Resources include access to qualified HSE professionals and technical experts.
2 RISK ASSESSMENT AND PLANNING		
2.1 Hazard Identification and Evaluation		
2.1.1 Location and Design of Storage Facilities The location and design or selection of new facilities or expansion of existing facilities, whether company owned or contracted, shall take into account the potential impact on the environment, the community and on adjacent industries.	2.1.1 (a)	Procedures are maintained for the formal evaluation of potential impact of location and design of storage facilities on the environment, on the community and on adjacent industries; before a decision is made to construct or select new facilities or expand existing facilities.
	(b)	Senior management are directly involved in decisions on location and design of new facilities or the expansion of existing facilities. The decision to proceed is authorised at the appropriate level.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
2.1.2 Hazard Identification Each company shall review the hazards of each chemical, the methods of containment and transport; and the procedures involved in the handling, storage and transport. "Hazard" shall include potential for environmental damage.	2.1.2 (a)	The company follows documented procedures, either directly or in consultation with the contractor, to review the hazards of each chemical in relation to the methods proposed to be used for containment, storage and transport. The review considers all of the chemicals concerned, not only those owned by the company.
	(b)	The company ensures, either directly or in consultation with the contractor, that documented instructions for handling and storage of company products have been provided as required.
2.1.3 Risk Assessment Each company shall assess and document the likelihood of accidents, releases or loss of containment and the impact of any human or environmental exposure. Efforts shall be made to hold minimum inventories and, in conjunction with relevant authorities, evaluate alternative modes and/or transport routes to minimise the inherent risk; at least for high risk chemicals. For guidelines, refer also to Risk Assessment in the RC Code for Product Stewardship.	2.1.3 (a)	The company, either directly or in consultation with the contractor, carries out a formal documented assessment of the potential for accidents, releases or loss of containment; taking into account the inherent hazard of the chemical and the S&T methods used.
	(b)	Risk assessment procedures include consideration of the minimum inventory of material needed to meet Business Objectives.
	(c)	The risks associated with regular transport have been assessed and, if appropriate, relevant authorities involved in the selection of alternate transport modes and/or routes; at least for high risk chemicals.
	(d)	The risk assessments are carried out in consultation with relevant employees and the risk reduction measures communicated.
2.1.4 New Chemicals Each company shall maintain a system which will accept new chemicals for storage and transport only after a proper risk assessment has been completed. In the case of contracted arrangements, this risk assessment shall be undertaken in consultation with the contractor, and shall take into account not only company owned chemicals, but also materials stored or transported on behalf of other clients.	2.1.4 (a)	Documented procedures are followed, either directly or in consultation with the contractor, for a formal assessment of risk associated with the acceptance of a new chemical.
	(b)	The risk assessment includes all of the materials stored or transported, whether owned by the company or by other clients of the contractor.
2.2 Legal/other requirements Each company shall establish systems to identify and maintain knowledge of legal requirements and industry best practice in relation to the storage and transport of chemicals; with particular emphasis on Dangerous Goods.	2.2 (a)	Formal systems are maintained for identifying and keeping up to date on legal requirements; with particular emphasis on Dangerous Goods
	(b)	Company representatives participate actively in industry and technical forums to keep up to date on best practice and share experience.
	(c)	Where appropriate, the requirements for Control of Major Hazard Facilities should be considered.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
2.3 Objectives Senior management responsible for storage and transport shall highlight the importance of setting objectives for reduction of incidents and continual improvement in HSE management, including ensuring that these areas are prominent in the job descriptions and goals of the individual(s) or the responsible team/work group involved.	2.3 (a) (b) (c)	Senior management have issued clear direction and expectations for the implementation of policy on the safety of S&T. These expectations are translated into specific overall HSE objectives for each significant S&T activity and/or contractor. Objectives place particular emphasis on measurement and reduction of incidents and on continued improvement in HSE performance.
2.4 Management Plans Management shall develop an overall HSE program and improvement plan which includes its storage and transport operations; in consultation with employees and, where appropriate, contractors and their employees. The plan shall ensure that adequate resources are made available and that accountability for its achievement is clearly assigned at all levels. The program and plan shall be structured so that progress towards the objectives can be measured.	2.4 (a) (b) (c)	HSE programs and improvement plans which include S&T operations have been established. Plans have been prepared in consultation with appropriate employees and, where appropriate, contractors and their employees. HSE programs and plans are adequately resourced and assign clear responsibility and timing for the achievement of their goals.
3 IMPLEMENTATION		
3.1 Structure and Responsibility Each company shall establish a formal structure for the implementation of this Code, which includes defined roles, responsibilities and authorities for an overall co-ordinator and, where appropriate, individual site or operational group co-ordinators. These co-ordinators shall interface closely with other responsible line functions.	3.1 (a) (b)	There is an overall co-ordinator for the implementation of the S&T Safety Code and a network of individual area/ business co-ordinators, as appropriate to the size and complexity of the business. Close consultation occurs between these co-ordinators and the responsible line functions, with appropriate support from HSE professionals and technical experts.
3.2 Training, Awareness and Competence **3.2.1 Materials Hazard Information** Each company shall establish procedures to have readily available complete and up-to-date information on the hazards of chemicals required to be stored and/or transported.	3.2.1 (a) (b)	Up to date Material Safety Data Sheets (MSDS) and other technical information, appropriate to the risk, are prepared for all chemicals required to be stored or transported. Procedures are in place to ensure that materials hazard information is provided to contractors and is readily accessible to both company and contractor employees.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
3.2.2 Identification of Training Needs Each company shall, either directly or in consultation with contractor management, identify the training needs of all personnel involved in storage and transport, particularly of dangerous goods and hazardous substances. Job descriptions (or equivalent) shall include a clear statement of required skills, functions, authorities and responsibilities; with special emphasis on emergency preparedness and response.	3.2.2 (a)	Documented procedures are followed, directly or in consultation with employees and contractor management to identify the HSE training needs for all personnel involved in S&T activities.
	(b)	Particular emphasis is placed on legal and best practice requirements for Dangerous Goods and Hazardous Substances.
	(c)	Written job descriptions (or equivalent) clearly state the required skills, functions, authorities and responsibilities of each person; at least for higher risk jobs.
	(d)	Special emphasis is placed on training needs for effective emergency preparedness and response.
3.2.3 Education and Training Each company shall ensure that its own and contractor employees are educated and trained in the properties of the products being handled, necessary procedures and required job skills; in order to minimise the hazards associated with the job. The training programs shall be structured so that competency can be assessed; and shall recognise the need for regular re-training on competency gaps.	3.2.3 (a)	Formal training programs are in place for HSE aspects of S&T jobs, covering all of the identified needs.
	(b)	Special emphasis is placed on training requirements for new or modified materials or storage.
	(c)	Specific training is conducted on the content and requirements of the emergency preparedness and response plan, particularly for key personnel involved in the initial response.
	(d)	Training programs include the assessment of competency before accepting responsibility, and as necessary thereafter.
3.3 Communications		
3.3.1 Community Awareness Each company shall ensure that local or affected communities, including those along transport corridors where special risks are evident, are provided with appropriate information, consistent with the obligations under the Responsible Care Code for Community Right to Know. This shall apply particularly to new facilities or transport plans involving company products, or significant changes to existing arrangements.	3.3.1 (a)	The company, either directly or in consultation with the contractor, identifies and records all parties who need information on storage and transport arrangements, with particular emphasis on neighbours of storage facilities and people close to transport routes of high risk chemicals.
	(b)	Early advice and consultation processes are provided for stakeholders, particularly for the establishment of new S&T arrangements or significant change to existing arrangements.
	(c)	Company and contractor S&T personnel are aware of and show a commitment to the RC Code for CRTK

Code Section/ Management Practice		Examples of acceptable implementation of management practice
3.3.2 Suppliers, Contractors and Sub-Contractors		
Each company shall establish regular close communication and liaison with contractors carrying out storage and transport operations on their behalf. The aim shall be to aid and require contractors and their sub contractors to achieve the same standards of implementation of this Code as if the activities were carried out directly by the company.	3.3.2 (a)	Company standards and requirements for S&T HSE are specified clearly in purchasing and contract arrangements.
	(b)	Regular written and face to face communications are maintained between company S&T personnel and contractors providing services for the company.
	(c)	S&T HSE issues are a regular agenda item in consultation arrangements with contractors and suppliers.
	(d)	Particular emphasis is placed on the effective management of sub-contractors.
3.4 Documentation		
Each company shall, either directly or in consultation with contractors, establish and maintain written documents necessary to implement this Code	3.4 (a)	Processes are established to identify the documents necessary to set up and implement the systems and procedures necessary to meet this Code.
	(b)	Documentation is properly developed and maintained.
	(c)	Close consultation takes place to ensure that contractors have satisfactory standards for HSE documentation.
3.5 Document Control	3.5 (a)	Appropriate control standards for company documents are established and maintained.
Each company shall establish systems to ensure that HSE information and other documents necessary for implementation of this Code are controlled in their distribution and are regularly reviewed and up-dated. Processes shall ensure that only the most up to date version of the document is in use.	(b)	Consultation occurs with contractors to ensure they have equivalent standards, at least for critical documents such as MSDS.
	(c)	Company and contractor systems ensure that HSE information is up to date and that only the current version of any document is available and in use.
3.6 Operational Control		
3.6.1 Contractor / Carrier Selection		
Each company shall establish criteria for the selection of storage facilities and carriers (which include safety performance and programs, inspection and maintenance procedures, selection and training of operators / drivers, support staff and sub-contractors). At least for high risk chemicals, companies shall actively encourage carriers to seek and obtain accreditation under the PACIA Carrier Accreditation Scheme.	3.6.1 (a)	Documented criteria are used to select contract storage facilities and carriers for company products, including the PACIA Carrier Accreditation Scheme.
	(b)	Selection Criteria include at least: • Effective HSE policy and programs • Inspection and maintenance procedures • Selection and training of operators / drivers, support staff and sub-contractors.
	(c)	The company actively encourages its transport contractors to seek and obtain accreditation under the PACIA Carrier Accreditation Scheme; at least for high risk chemicals.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
3.6.2 Containers and Modes of Transport Each company shall specify containers and modes of transport appropriate to the properties of the product and the volumes to be handled.	3.6.2 (a)	Documented procedures are used to specify containers and modes of transport at least meeting legal requirements.
	(b)	The company maintains processes to monitor and implement industry best practice, including bulk transport where appropriate.
3.6.3 Operating Arrangements and Procedures Each company shall ensure that all HSE critical operations and/or driver/sub-contractor management are covered by documented procedures, appropriate to the risk. Particular issues include segregation of materials, labelling and placarding, loading/unloading, load restraint and driver fatigue management.	3.6.3 (a)	The company, either directly or in consultation with the contractor, ensures that documented procedures are used for at least the higher risk aspects of S&T operations; with particular emphasis on sub-contractors. Relevant employees are also involved.
	(b)	Procedures cover at least: • Segregation of materials • Consignment documentation • Labelling and Placarding • Loading and Unloading • Load Restraint • Driver fatigue management and fitness for duty.
3.6.4 Maintenance Programs Each company shall ensure that maintenance programs are in place to ensure the reliability and fitness for use of facilities, equipment, containers and vehicles.	3.6.4 (a)	The company, either directly or in consultation with the contractor, ensures that appropriate maintenance programs are established for facilities, equipment, containers and vehicles.
	(b)	Maintenance programs and records are appropriately documented.
3.6.5 Container Return and Re-use Each company shall deal effectively with the risks involved in the return, cleaning, re-use and servicing of containers and bulk transport vehicles. Procedures shall ensure the proper disposal of cleaning residues and unusable containers.	3.6.5 (a)	Documented procedures are used to effectively manage the return, re-use and servicing of containers and bulk transport vehicles.
	(b)	Procedures include the identification and control of environmental aspects of container return and re-use; in accordance with the RC Code of Practice for Environment Protection but at least ensuring the proper disposal of cleaning residues and unusable containers.
3.6.6 Management of Change Change shall be managed to ensure the maintenance of original or up-dated standards. Controls shall be established to ensure that any risks resulting from new chemicals or changes in processes or equipment are managed appropriately and are implemented with update of documentation and training.	3.6.6 (a)	Change in chemicals, facilities or processes for S&T is managed generally in accordance with the RC Code for Manufacturing Process Safety.
	(b)	The company ensures, either directly or in consultation with the contractor, that any change is implemented only with formal approval by company management and is implemented with full documentation update and training.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
3.6.7 Security Each company shall ensure that appropriate security precautions and procedures are in place to protect facilities, containers and vehicles from sabotage or threatened dangerous actions and to protect members of the community from harming themselves by coming in contact with chemicals. Particular emphasis shall be placed on protecting against unauthorised access on a 24 hour, 7-day basis.	3.6.7 (a)	The company ensures, either directly or in consultation with the contractor, that adequate security arrangements are in place; appropriate to the risk. The basis for decisions is documented.
	(b)	Security arrangements specifically protect against unauthorised access on a 24 hour, 7 day basis; at least by appropriate fencing and/or locking.
	(c)	Security arrangements include consideration of access and information requirements of emergency services.
3.7 Emergency Preparedness and Response		
3.7.1 Emergency Scenarios Natural events, road accidents or failure of utilities, equipment or procedures may lead to the onset of an emergency. Companies shall ensure that facilities, containers, vehicles and operating procedures make provision for high risk events. In addition, analysis and documentation shall be prepared for serious situations, up to and including the worst credible incident. Situations considered shall include those with potential for harm to the environment.	3.7.1 (a)	The type, relative likelihood and consequences of emergency scenarios for S&T arrangements, have been identified and documented. Particular emphasis given to Loss of Containment.
	(b)	Provision for high risk events has been made in the facility, container or vehicle design and/or operating instructions, either directly or by the contractor.
	(c)	Scenarios for serious situations, up to and including the worst credible incident, have been evaluated with a view to what scope of emergency response planning is required to maintain the health and safety of employees and the community and prevent damage to the environment.
	(d)	Scenarios include the assessment of possible impact from neighbouring facilities both inside and beyond storage site boundaries.
	(e)	Analysis of emergency scenarios includes those which have potential environmental impact even if little potential for injury or illness exists.

Code Section/ Management Practice	Examples of acceptable implementation of management practice
3.7.2 Emergency Plans Formal plans shall be developed to handle unplanned events, which identify and describe the communication systems, resources, roles and responsibilities of company and contractor personnel. Plans shall be prepared in consultation with contractors, employees and emergency services personnel including, where appropriate, First Responders along Transportation Corridors. Plans shall provide for co-operation with government or other agencies during and after an incident. Plans shall be tested regularly as prescribed in Section 4.1.5	3.7.2 (a) Company Emergency Plans make specific provision for the handling of “on site” and “off site” storage and transportation incidents, either directly or in close co-operation with contractors. Plans are documented, their scope being in proportion to the risk and taking into account at least the likely emergency scenarios. (b) Plans have been developed in consultation with employees, contractors, Response Agencies and other interested stakeholders including where appropriate, First Responders along Transportation Corridors. (c) Where appropriate, plans have been co-ordinated with the plans of neighbouring industries and community disaster plans. (d) Features of the plans include, at least : • Early warning and initial information arrangements • Communication between the contractor and the company • Response in remote areas • Training and responsibilities of company and contractor employees • Measures taken to control or limit the consequences • Communications with emergency services and additional company resources • Provision for co-operation with government agencies during and after an incident • Information on hazards, inventories of hazardous materials, etc at least meeting legal requirements • Procedures for safe evacuation of, and accounting for, all people who may be affected. • Provision of information to the community, to the families of persons affected, and to other concerned stakeholders • Provision for recovery and rehabilitation of affected persons and facilities. • Procedures for control / cleanup of any environmental damage.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
3.7.3 Emergency Equipment Each company shall ensure, either directly or through the contractor, the provision of appropriate and well maintained emergency equipment, consistent with emergency plans for at least the more likely scenarios. Emergency Services shall be encouraged to make recommendations and become familiar with facilities and equipment.	3.7.3 (a)	Emergency equipment needed for at least the more likely foreseeable scenarios is identified, documented, operated and maintained to a standard appropriate for critical items.
	(b)	Emergency equipment includes provision for mitigation of the environmental impact.
	(c)	Emergency equipment is tested on a regular basis and those required to use it are properly trained on its purpose and operation.
	(d)	The company responds to the needs of Emergency Services by appropriate activities, including regular familiarisation tours, discussions and joint drills / demonstrations of emergency equipment.
3.7.4 Plan Review and Update Emergency Plans shall be reviewed regularly in the light of changes such as in chemicals handled, facilities and procedures, transport modes and routes. Updated plans shall again be prepared in consultation with all stakeholders.	3.7.4 (a)	The emergency plans are reviewed and updated whenever a significant change in storage facilities or transport arrangements, including changes in key personnel and contact details; but no less frequently than once every two years.
	(b)	Reviews of the plan take into account lessons learned from investigations and de-briefing following incidents and practice drills.
	(c)	Process exists for obtaining input following significant incidents elsewhere in the industry, both in Australia and overseas.
	(d)	Plan updates are implemented with full consultation, documentation and training.
4 PERFORMANCE MEASUREMENT AND CORRECTIVE ACTION **4.1 Monitoring and Measurement**		
4.1.1 Routine Inspection Procedures shall include frequent inspection of facilities, containers and vehicles, with particular emphasis on ensuring fitness for use, cleanliness and provision of necessary emergency equipment, documentation, placarding and labelling.	4.1.1 (a)	The company ensures, either directly or in consultation with the contractor that routine inspections of storage facilities and transport containers/vehicles are carried out, using checklists or equivalent.
	(b)	Inspection programs include checks by experienced personnel not directly involved in day to day operation; and in close co-operation between company and contractor.
	(c)	Inspection requirements at least include; • Fitness for use • Cleanliness • Emergency equipment • Documentation • Placarding and labelling • Segregation and containment

Code Section/ Management Practice		Examples of acceptable implementation of management practice
4.1.2 Maintenance Monitoring Procedures shall be in place for the monitoring and reporting of progress on maintenance programs, including equipment and/or vehicle breakdowns.	4.1.2 (a)	Documented procedures are followed, either directly or by the contractor, to monitor the actual carrying out of maintenance programs.
	(b)	Equipment and/or vehicle breakdowns are recorded to enable review and analysis.
4.1.3 Incident Reporting Each company shall ensure the reporting of incidents and near misses, involving company products, during storage and transport. Contractors shall be required formally to report such incidents promptly to the company and company personnel to report regularly to management.	4.1.3 (a)	A system is maintained, either directly by the company or by the contractor, for the reporting by any employee of incidents and near misses during storage and transport operations.
	(b)	Contract arrangements, or equivalent, require the reporting of significant incidents to the client company.
	(c)	Incident reporting guidelines cover all areas, including environmental impact.
4.1.4 Contractor Performance Each company shall regularly monitor and report on contractor HS&E performance and commitment to the implementation of this code. Where appropriate to the risk, company personnel shall conduct routine inspections and audits at contractor facilities.	4.1.4 (a)	A formal process is established for monitoring trends in contractor HSE performance and implementation of relevant sections of this Code.
	(b)	For higher risk areas of operation, this process includes regular face to face and physical presence at contractor facilities for inspection and auditing; particularly if the trend in incidents gives cause for concern.
	(c)	The PACIA Carrier Accreditation Scheme check list is in regular use.
4.1.5 Emergency Preparedness Testing Each company shall establish a process for testing and, if necessary, upgrading of emergency preparedness on a regular basis. Simulated exercises and practice drills shall be conducted in co-operation with contractors and emergency services personnel.	4.1.5 (a)	There is a regular program (at least annually) for the testing of emergency preparedness and response plans, including the associated emergency equipment.
	(b)	Testing is carried out in close co-operation with the contractor(s) and, if possible, with the active participation of external emergency services.
4.2 Problem Analysis and Corrective Action		
4.2.1 Analysis of Feedback Each company shall analyse feedback from monitoring activities and reports from contractors.	4.2.1 (a)	Documented procedures are followed to analyse feedback from monitoring and testing programs.
	(b)	Analysis is carried out in consultation with the contractor and, if appropriate, joint reporting takes place.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
4.2.2 Incident Investigation Each company, either directly or in consultation with the contractor, shall investigate and analyse all incidents / injuries / illnesses occurring during storage and transport of company products. A team approach is preferred, with emphasis on determining "root causes" and contributing factors; not to assign "blame". The team should recommend corrective action for consideration by company and contractor management.	4.2.2 (a)	Storage and Transport incidents are promptly investigated by the company, both directly and, where appropriate, in consultation with the contractor.
	(b)	A team approach is preferred, aimed at "root causes" and not to assign "blame". The team recommends appropriate corrective action, in writing.
4.2.3 Corrective / Preventative Action Procedures shall provide for documentation and follow up on corrective and/or preventative action deemed necessary on contractor HSE performance, incidents, injuries and illnesses, including near misses. Particular attention shall be paid to feedback from testing of Emergency Plans.	4.2.3 (a)	Documented procedures are followed for prompt decisions on corrective/preventative action following analysis of HSE performance trends and incidents.
	(b)	Decisions are communicated appropriately to those concerned, particularly those involved in the reporting and investigation.
	(c)	Planned action specifies clear responsibilities and timing, with provision for documented follow-up.
	(d)	Contractors are directly involved or advised of requirements for planned action.
	(e)	Particular emphasis is placed on emergency preparedness and response capability.
4.2.4 Temporary Cessation of Business Each company shall consider exercising its independent judgement to temporarily withdraw product or terminate its business relationship with any contractor who is unwilling to implement corrective actions appropriate to limiting risks or otherwise achieving the HS&E objectives of this code. Contractors shall be made aware in advance of this condition for entering into a contract.	4.2.4 (a)	Contract arrangements, or equivalent, make it clear that the company will consider temporary or permanent cessation of business in the event of continued poor HSE performance or lack of commitment to at least the principles of this Code.
	(b)	Consultative processes are followed to resolve problems of poor performance before a decision on cessation of business is made.
	(c)	Commercial considerations are not permitted to outweigh the need for satisfactory HSE performance and commitment.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
4.3 Records Each company shall ensure that the records necessary to implement the requirements of this Code are prepared, retained in good order and accessible to those requiring the information.	4.3 (a)	Individuals/Teams responsible for S&T Safety have considered what records are required, by the company and/or the contractor; to maintain systems and meet the requirements of this Code.
	(b)	Records are properly developed and maintained.
4.4 System Audit Each company shall establish procedures for the regular review of the operation and effectiveness of the systems and procedures for Safe Storage and Transport; and to provide appropriate reporting to Management.	4.4 (a)	A regular audit (at least every two years) takes place on the extent of implementation of the agreed systems and procedures for Storage and Transport Safety. This could be part of an overall review of an integrated management system, but must place specific emphasis on Storage and Transport Safety issues.
	(b)	Audits may be internal and/or external, as appropriate.
	(c)	The results of these audits are reported to the appropriate level of senior management.
5 MANAGEMENT REVIEW		
5.1 Review of Code Requirements The CEO (or equivalent) of each company or major business unit shall become familiar with and review the requirements of this Code with appropriate members of the Storage and Transport team.	5.1 (a)	There is direct involvement by the CEO (or equivalent) in reviewing the requirements of this Code, at least with the overall Code Co-ordinator, but preferably with the implementation team.
	(b)	Evidence exists that this process is repeated at least whenever new personnel become involved.
5.2 Review of Progress At least every two years, the CEO (or equivalent) shall demonstrate commitment by actions including: • Initiating a self-assessment on implementation of the Code. • Reviewing feedback from the assessment with appropriate members of senior management. • Initiating and approving agreed plans. • Reviewing the results from implementation of the agreed plans.	5.2 (a)	There is direct involvement by the CEO (or equivalent) in all of the activities listed in management practice 5.2
	(b)	The self-assessment covers at least all the items in these self-assessment criteria for the Code, preferably in the format to be used for reporting to PACIA in accordance with the agreed program.
	(c)	The agreed plans are endorsed formally by the CEO (or equivalent) and communicated widely.

Code Section/ Management Practice		Examples of acceptable implementation of management practice
5.3 Program Review and Upgrade The overall Safe Storage and Transport plan and compliance with this Code shall be reviewed and the plan up graded at least once every two years.	5.3 (a)	A system is in place for formal assessment of system audit findings and appropriate corrective action.
	(b)	In addition to the regular systems reviews, evidence exists of a periodic overview of the plans and Code compliance with regard to strategic direction and policy consideration, specifically targeted at upgrade of the plans and for input to PACIA on improvements to the Code.
5.4 Industry Performance Profiles It is important that the industry compile and report on overall HSE performance, including code compliance. To this end, the CEO shall ensure that the results of the Self-Assessment are reported to PACIA in accordance with the agreed format and timetable. The CEO shall also ensure that the company responds to PACIA surveys on other performance indicators, as decided by the PACIA Board. The CEO shall confirm agreement for the company data to be included in PACIA public reporting.	5.4 (a)	Self-assessments on the Storage and Transport Safety Code are completed and forwarded to PACIA within the agreed time frame.
	(b)	Company response to all other PACIA surveys on Storage and Transport Safety related performance indicators is completed within the agreed time frame.
	(c)	Formal CEO agreement for inclusion of company data in public reporting of industry performance is given.