




STERLING CHEMICAL MALTA LTD

ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL

DATA ASSIGNMENT DOCUMENT

COPY	DELIVERED TO	APPROVED BY RSGA
No. 1	Malta Environmental & Planning Authority
Delivered on	ROLE	APPROVED BY TP
	Above us


	ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 2 of 25

REVISION HISTORY

Date	Revision	Sections Affected	Change description
21.02.2014	Rev.00		Document first issued


APPROVALS

Document code: MEMS	Edited by RSGA	Approved and implemented by: Top Management
Page 2 of 25		

	ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 3 of 25

INDEX

1	Introduction	4
2	Purpose and scope	4
3	terms and definitions	5
4	Management system elements.....	7
4.1	general requirements	8
4.2	Environmental policy	8
4.2.1	Procedure for adoption of integrated policy	9
4.3	planning.....	10
4.3.1	environmental aspects and risks assessment	10
4.3.2	legal and other requirements	12
4.3.3	Objectives, targets and programs	14
4.4	implementation and operation	15
4.4.1	resources roles and responsibilities	15
4.4.2	competence, training and awareness	15
4.4.3	consultation and communication	17
4.4.4	the documentation	18
4.4.5	DOCUMENTs MANAGEMENT	20
4.4.6	OPERATIVE CONTROL	21
4.4.7	Preparation and response to emergencies.....	21
4.5	check	21
4.5.1	monitoring and measurement	22
4.5.2	assessment of compliance with requirements	22
4.5.3	Non-compliance, incidents corrective actions and preventive actions.....	23
4.5.4	records check	23
4.5.5	Internal Audit	23
4.6	Top management REVIEW	25

	ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 4 of 25

1 INTRODUCTION

This Manual describes documents, coordinates and integrates the organizational structure, responsibilities and all the activities that regulate the implementation, management and operation of the Environmental Management System designed for this purpose:

- Ensuring environment protection, in compliance with the voluntary and applicable mandatory standards;
- Applying continuous improvement activities.

Top Management desires this Manual as business tool that allows all staff, at all levels, to understand, apply and support principles, commitments and objectives established by Policy.

It is Management's will to extend the Manual to all stakeholders (customers, suppliers, public authorities, population) that intend to comply with the company initiative towards continuous performance improvement to protect sensitive elements such as environment, health and security.

This manual is therefore part of a view that ties all procedures, operational instructions, manuals and anything else to the Organization and not to its individual components.

The system is meant to be kept alive and autonomous regardless of the actors who interpret it.

The manual has been edited in compliance with the UNI EN ISO 14001 standard that constitutes a permanent reference for Environmental Management System implementation and application (SGA).

Table 1 summarizes legislative references useful for editing this manual.

Initial	Title
ILO International Labour Organization	Main guideline for applying a work place health and security management system
UNI EN ISO 14001: 2004	Environmental management system: Requirements and usage guide
UNI ISO 14004	General main guidelines on support principles, systems and techniques

Table 1 Legislative reference for editing the Manual.


2 PURPOSE AND SCOPE

The Sterling Chemical Malta Ltd company intends to voluntarily adopt an Environmental Management System (SGA) that integrates economical productive objectives and policies with environmental interests and public health protection in the wake of what has already been achieved in the Italian plant, where the system is certified and the manual is properly used as a reference point by operators at all levels.

The SGA is applied to all organization, all company activities carried out.

The aim of this Manual is to describe the Management System adopted complying with ISO 14001 standard requirements.


The SGA defines how to identify responsibilities, procedures, processes and resources for the implementation of business policy, in compliance with mandatory and voluntary standards, within the company organizational structure.

	ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 5 of 25

3 Terms and definitions

In the context of this manual definitions used are contained in the standard and laws in force, which are related below for easy document reading and understanding (Table 2).

Word	Meaning
Environment	Context where an organization works, including air, water, soil, natural resources, flora, fauna, humans and their interrelation.
Environmental aspects	The elements of organization activities, products and services that may interact with the environment
Significant environmental aspects	These are organization activity elements that produce significant environmental impact
Audit	Systematic, independent and documented process to obtain “audit evidences” and objectively assess them, in order to establish to what extent the audit criteria has been fulfilled. [see ISO 9000:2005, 3.9.1)
Corrective action	Action implemented to eliminate the causes of identified non-compliance situations or other undesired events.
Preventive action	Designed action to eliminate the cause of a potential non-compliance or other potential undesirable situations.
Certification	The procedure whereby a certifying body (a third party) certifies that a product, a process, a service or professionals comply with the requirements specified by the regulation.
Document	Information and its support
Training	Educational process whereby useful knowledge is transferred to workers and other subjects about the prevention and protection business system and procedures for learning safely skills to carry out their tasks in the company along with risk identification, reduction and management.
Danger identification	Process for existing danger recognition and definition of its features.
Environmental impact	Any environmental change, negative or good, totally or partly caused by the organization environmental aspects.
Accident	Event/s related to work activity that has or could have caused injuries, death or occupational disease (regardless of its seriousness).
Operative instruction	It is an operational document reporting all necessary information to work to the best. It is considered at a lower level compared to procedures.
Work place	Each physical place where work activities are carried out under organization control.


	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 6 of 25

Word	Meaning
Continuous improvement	All those recurring activities aimed at improving the organization's capacity to satisfy requirements. Data analysis, audits, management reviews, preventive and corrective actions, etc., are tools that can be used for continuous improvement. Fields of improvement include products, services, communications, environment, individual processes, systems, etc...
Non- compliance	Requirement is Not-satisfied.
Organizational Chart	It is the diagram or tree diagram showing organization units and their hierarchical and functional relations (authority and coordination levels and lines together with dependence and relation lines). It is a graphical representation of the individual organizational unit's placement inside the business structure, expressed by highlighting mutual dependence relations (hierarchical or functional).
Organization	Group, company, corporation, firm, body or institution, or rather their parts or combination thereof, whether incorporated or not, public or private, that has its own functional and administrative structure.
Stakeholders	People or groups, internal or external work environment, interested or affected by the performance of the organization's OH&S.
Danger	Source, situation or act that may cause an injury such as a wound, an occupational disease, or a combination of the above.
Performances	Organizational results measureable by management
Procedure	Specified procedure to carry out an activity or a process
Registration	Documentation containing the results achieved or providing the evidence of activities carried out.
Legal requirements	Community, state and local laws or regulations, and each voluntary commitment by the organization.
Risk	Probability of reaching the potential level of damage in conditions of exposure to a factor or agent or their combination.
Risk assessment	Probabilities combination of a dangerous event (or exposure) and wound or serious occupational disease occurring that can be caused by that event or exposure

Table 2 Terms and meanings related included in the Manual.

While drafting the Management Manual, Procedures, Operating Instructions and any other System document, acronyms and abbreviations indicating meanings related below in Table 3 are used:

Abbreviation	Meaning
ISO 14001	Standard UNI EN ISO 14001:2004

	ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 7 of 25

Abbreviation	Meaning
EMS	Environment Management System
TP	Top Management
RSGA	Environmental Management Representative
MEMS	Environment Security Management System Manual
MPA ¹	Environmental Procedure
MIOA	Environmental Operating Instructions
MDA	Environmental General Documents
MMA	Environmental Module
MRA	Environmental Register
MNCA	Environmental Non-compliance
MACA	Environmental Corrective Actions
MAPA	Environmental Prevention Actions
RD	Research and Development
QA	Quality Assurance
QC	Quality Control

Table 3 Reference acronyms listed within the Manual.


4 MANAGEMENT SYSTEM ELEMENTS

The objective of this section of the Manual is to illustrate a defined organizational structure, authorities and responsibilities to make SGA operative. The SGA documentation and the necessary procedures are so identified to ensure its correct management.

The following table indicates the references between the points of the UNI EN ISO 14001:2004 standard and paragraphs in this document.

UNI EN ISO 14001	Subject
4.1	General Requirements
4.2	Environmental policy
4.3	Planning
4.3.1	Planning for hazard identification, risk assessment and risk control of Environmental impact
4.3.2	Legal and other requirements
4.3.3	Objectives, Aim of project
4.4	Implementation and operation
4.4.1	Structure and responsibility
4.4.2	Training, awareness and competence

¹ M: indicates the Maltese plant, it shall remain in force until the plant is fully autonomous, in terms of management, from the Italian one.

	ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 8 of 25

4.4.3	Consulting and Communication
4.4.4	Documentation
4.4.5	Document and data control
4.4.6	Operational control
4.4.7	Emergency preparedness and response
4.5	Checking and corrective action
4.5.1	Performance measurement and monitoring
4.5.2	Evaluation compliance
4.5.3	Accidents, incidents, non-compliance and corrective and preventive actions
4.5.4	Records and records management
4.5.5	Audit
4.6	Management review

Table 4 Correlated references among regulation, system structure and this Manual.

4.1 GENERAL REQUIREMENTS

The management System must allow the entire organization to:

- Comply with principles and achieve objectives set out in the environmental policy;
- Identify and propose any opportunity for further improvement of environmental performances;
- Provide Management all necessary information to accurately assess business performances.


Detail level, complexity, documentation quantity and dedicated resources are sized according to the organizational structure and resources made available.

The system structure is flexible and is based on management's dynamic and cyclical pattern "Plan, Implement, Control, Review".

4.2 ENVIRONMENTAL POLICY

The environmental policy is system cornerstone. It represents and expresses organization or firm strategic approach in the environmental field.

Establishing an integrated policy for the environment, top management makes and points out a clear choice that orients the entire system development.

	ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 9 of 25

4.2.1 PROCEDURE FOR ADOPTION OF INTEGRATED POLICY

The procedure following the drafting of integrated policy and its formalization has included, or will include the following steps if updated:

4.2.1.1 DRAFT EDITING TO BE SUBMITTED TO TOP MANAGEMENT

The draft editing is made by technicians responsible of the environment, health and security management system as they know the general requirements imposed by the standard, besides it must be consistent with the environmental analysis, first the initial one and subsequently the revised one that updates the photograph of the Sterling-Environment relation every two years or anytime substantial changes occur to this relation. Among the requirements, technicians will have to include the commitment to comply with legislation, adoption of the continuous improvement principle and the prevention concept. It is a “draft” because it must be proportioned to organization size (also included in the size concept is a measure of the influence that the organization may effectively have on the community) and must be sized to the concrete economical possibilities. The draft is therefore a proposal that must be integrated and changed with a strong research of its application will.

4.2.1.2 PRELIMINARY VERIFICATION

The preliminary check is carried out by management system verifiers representing Top management and represented by the Environmental Management System Manager. Also these professionals can bring about changes unless they contradict or exclude general requirements of the standards guide.

4.2.1.3 FINALISATION AND APPROVAL

It is better for approval to be visible, normally through signature by the most important company supervisors.


4.2.1.4 METHODS OF INFORMING THE STAFF AND ANY PEOPLE WORKING FOR STERLING OR ON ITS BEHALF

The policy informing method is the following:

- Posting on company bulletin boards;
- Intranet (mail, quickr, Valuto);
- Inclusion on the company website.

4.2.1.5 METHOD OF MAKING AVAILABLE TO THE PUBLIC

The organization has decided to adopt a proactive attitude, or rather to forward its policies to its counterparties without waiting for request. Management will update stakeholders, who can be any suppliers, customers, banks, PA bodies that relate to the company, etc., according to the introduction of new reference points.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 10 of 25
Issue date: 21.02.2014		

The company has decided to make customers, controlling PA bodies during inspection and suppliers during verification know its policy.

4.2.1.6 PERIODIC VERIFICATION AND POSSIBLE UPDATE

There is no obligation for policy review; however the periodic verification occurs as part of the Management Review in the light of internal Audit results and all changes imposed by changing circumstances and continuous improvement commitment. This allows verifying both application and needs for change, depending on the results, and the general company strategies: here is an assessment of the possible need to change objectives depending on the results achieved, also considering the economic aspects at the same time (System efficiency). Technicians can propose a new text or change the existing one within the Review.

4.3 PLANNING

4.3.1 ENVIRONMENTAL ASPECTS AND RISKS ASSESSMENT


The assessment of the business activities impact on the various environmental matrices must be done considering both normal operative conditions of maximum productive efficiency and abnormal situations.

Normal operative conditions are those of plants operation, carrying out activities and use of products according to the applicable specifications and instructions, or with the generally recognized and accepted procedure by all assignees. Abnormal operative conditions are those different from the normal ones, but at the same time desired and planned (the most classic of these conditions are those of plant start-up and shutdown, and not only) but also those that develop after emergency situation (incidental or not) conditions neither normal nor desired nor planned; generally environmental impacts that are more serious than those in normal conditions are associated to them, even if the situations that cause them are limited in time.

The significance assessment will have to take into account all the possible operative conditions, normal, abnormal and emergency ones making it possible to constitute a matrix of complex but efficient judgment and intent on covering all possible doubts. This matrix should be kept up to date, especially as for the identification of regulatory requirements, risks assessment and analysis of the environmental aspects. Except for exceptional events that may cause negative impacts on the environment or a substantial increase of the risk, upgrades, if necessary, will have to be made at predetermined intervals (every two years), and this matrix should be updated anyway if new plants, new activities, etc., or significant changes are made to existing situations.

The analysis of the environmental aspects must cover both direct aspects, those under organization control (consumption, emissions, etc.) and indirect aspects, those on which the organization has no direct control but may exert its influence to some extent: e.g. goods or staff transportation, disposal of own products at the end of their lives, services received by companies operating in the site, certain materials or equipment purchased, etc.

The editing, correction or update of the initial environmental analysis will have to follow procedures in order to assert a guideline for the assessment of the individual environmental aspects. The initial environmental analysis will be conducted only in view of the ISO 14001 certification.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 11 of 25
Issue date: 21.02.2014		

4.3.1.1 **THE GENERAL PROCEDURE**

The associated procedure consists of the following points:

- First identification of the processes that organize the initial analysis; describing these processes and the phases that organize them;
- Defining normal, abnormal and emergency conditions;
- Identifying procedures by which, at least theoretically, it is possible to check environmental aspects or intervene on them;
- Identifying environmental aspects and their environmental data detected at process level and those only detected at the entire organization level;
- Assessing the significance of environmental aspects (in normal, abnormal, emergency conditions) according to predefined criteria described in the procedure;
- Identifying the applicable legislation;
- Consolidating data at the organizational level and assessing organization performances.

4.3.1.2 **IDENTIFICATION OF THE ENVIRONMENTAL ASPECTS**

The organization can have control over environmental aspects subsequently called “direct impacts”, but is unable to have full control over “indirect” ones, these can simply be influenced. Usually simple checklists are used to identify direct environmental aspects, and the applicability of each element of the list to the considered situation is assessed. The direct environmental aspects included in the ISO 14001 intertwined with the site requirements and drawn after the environmental impact assessment:

- a) Atmospheric emissions;
- b) discharges into receiving bodies of water;
- c) drains into the ground;
- d) use of starting materials and natural resources;
- e) energy use;
- f) energy emitted, e.g. in the form of heat, radiations, vibrations, noise
- g) waste and by-products;


The reference procedure shows a more detailed checklist.

Usually indirect aspects are also seen for the contribution (aware or not) of at least another subject different from the organization (we shall call him “intermediate subject”) with which the organization shares management control.

Impacts resulting from a direct aspect are exclusively generated by activities and decision making processes of the organization (that may have a full and especially autonomous management control over them, through an adequate and effective management system), while those generated by an indirect aspect also depend on the activities and decision-making powers of other subjects, which are active parts in the interaction procedures between the organization and the environment.

The following is an exemplification of indirect environmental aspects:

- the environmental characteristics of machinery, plants, equipment, materials and services purchased by the organization;
- environmental behaviour of suppliers, and particularly of firms operating in the organization sites (e.g. the company managing the canteen, or those transporting the organization’s products);
- Consumption and emissions produced by means of transport used by employees travelling between home and place of work and vice versa, or for business;
- The procedures for the use and disposal of the organization’s products at the end of life;

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 12 of 25
Issue date: 21.02.2014		

- Consumption of machinery and plants on which components produced by the organization are used.

In all these cases intermediate subjects are recognizable (suppliers, firms, employees, end-users, designers of machinery using components produced by the organization, etc.) in many cases the organization can exert some level of control or influence over their behaviours. Starting from the possibility of a highly controlling and conditioning capacity on behaviours through the definition of rules and monitoring (for instance against firms operating in the organization site or transporters of the organization's products) until influenced situations by the empowerment and involvement of the external subjects through:

- Actions aimed at creating conditions for adopting correct environmental choices;
- actions directing or encouraging the adoption of correct behaviours;
- Awareness and information actions.

The **assessment of the control level** that the organization has over the indirect environmental aspect coincides with the assessment of the intervention possibilities. As for the indirect environmental aspects, this assessment is essential, and must be conducted regardless of significant assessments.

If assessed control level is high, the entire environmental management system will have to keep into account relative indirect environmental aspects; if it's low, or even tends to zero, the equivalent environmental aspects and the activities from which they derive can be recorded, but they influence neither the program nor the other parts of the management system.

As for the identification of critical points it will be possible to rely on the experience gained by the Italian plant, certainly larger and more complex from every point of view.

4.3.1.3 REFERENCES OF THE INITIAL ANALYSIS IN THE SYSTEM

In the Sterling management system the initial analysis on the assessment of the environmental aspects, positive or negative, direct or indirect, and the identification of dangers with the associated risks assessment is dealt with the Documents listed in the following table.


Cod. Doc.	Name	Meaning
MPA_4.3.1	Environmental aspects	Procedures for significance identification and assessment of the environmental aspects and effects

Table 5 Structure for the initial analysis of Environment management system.

4.3.2LEGAL AND OTHER REQUIREMENTS

Three essential criteria are adopted for editing all system documents referring to this section:

1. The organization must have a mechanism to promptly identify and analyse the new security and environment regulation applicable to its activities and products;
2. Sterling Chemical Malta Ltd must have precise and clear documentation on the commitments with external or internal counterparties by which arise requirements regarding its environmental aspects and health and security management in the work places;

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 13 of 25
Issue date: 21.02.2014		

3. Sterling Chemical Malta Ltd must have a mechanism that ensures the application of the new regulation within the time it requires.

4.3.2.1 IDENTIFICATION AND ANALYSIS OF THE APPLICABLE REGULATION

In the basic documentation and in the relative operative procedures and instructions associated to this system section it is appropriate establishing a common point to identify the new regulation and examine its applicability to Sterling. Methods and supports are here suggested:

- Use of periodically updated database, possibly supported by online update services, ensuring continuity between an update and the other;
- Consultation of websites that provide constant updates in security and environment;
- Reading specialized press (newspapers and magazines);
- Consultation of newsletters from business associations;
- Use of consultants.

The procedure provides that the person who identifies the applicable regulations or potentially ones, it also provides the proper interpretation, if needed, connecting elements with the previous regulation or another one, and ability to coordinate the analysis of applicability, when not obvious. The specialized press and newsletters of business associations can considerably help for the interpretation and applicability issues.

4.3.2.2 THE APPLICATION ANALYSIS

It is good practice for the technician asked to identify the standards and other applicable requirements coordinates the application analysis identifying the Functions involved. This analysis must include the assessment of the possibly necessary resources, but not only from the economical point of view, possibly training needs, and implementation times.


The application process must provide an application control submitting this topic to an audit with at least yearly expiration.

Finally the Sterling has decided to keep a register of the applicable regulation active. The register must be readily available, and it will represent a regulatory reference point for the entire organization, already customized to the organization. In addition to the classical references of the standard, as the title, the register will include reports on the reference frame and a brief description of the specific application requirements for the organization. In the register it will be added a list of the existing authorizations, with the indication for each of them by the competent authority and the expiration dates where applicable.

The following Table 6 summarizes the management system documents associated to this section.

Doc. Cod.	Name	Meaning
MRA_4.5.1_1	Environmental laws register	Entry register of the environmental laws and other requirements applicable to the organization
MRA_4.5.1_2	Assessment register of compliance with legal environmental requirements	Register to verify the fulfilment of legal requirements
MPA_4.3.2	Legal and other requirements	Procedures for analysing the requirements applicable to the Organization

Table 6 System documents according to legislation applicable to the Organization.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 14 of 25
Issue date: 21.02.2014		

4.3.3 OBJECTIVES, TARGETS AND PROGRAMS

In order to concretely enforce policy, each business activity is analysed and objectives consistent with the policy are defined; the necessary actions to the achievement, responsibilities, resources and methods to measure achievement are defined for each objective. The objective of this section of the Manual is also to describe what the system applies to examine, assess and control, according to laws and regulations, processes and factors that may cause risks and/or environmental impacts. The initial environmental analysis, which describes the starting conditions and identifies certain constraints (those regulatory for instance), and the policy that sets the strategic lines, constitute the necessary preconditions to elaborate and set the performance objectives on the Environment and also health and safety subject in the workplace, first basic step of the planning process. When the Sterling sets its own objectives, it will always have to keep into account requirements that arise from the legislation or other commitments signed by the organization, technological options, financial, operative and business requirements, stakeholder's points of view.

For the system built by Sterling the objectives will represent specific commitments that the organization makes to improve its own environmental performances, in accordance with its own management system policy that will be integrated in future with measures to support workers health and security in the workplaces, and consistent with the results of the initial analysis and their updates, also in terms of the priority.

Jointly considering the ISO standard, the **objectives**:


- must be set by the organization for each relevant task and level;
- must be consistent with the environmental policy, commitment to continuous improvement included;
- must take into account legal requirements or other applicable requirements, significant environmental impacts, technological options, own financial, operative and commercial needs, stakeholders points of view;
- Must be scheduled and quantified or measurable when possible.
- All the objectives cannot be separated from constraints dictated by health and security protection in the workplaces;

The objectives must be documented (included responsibilities and authorities for their achievement), the process of setting objectives has address and stability constraints but is part of a procedure.

While setting objectives, the management team will have to take into account most critical areas first; these are the ones at highest significance assessment.

Since the objectives indicate a desired situation that is expected to achieve, and since the definition of the environmental objectives must first reflect commitments that the organization means to make as for its performances in these management areas, setting objectives should refer to predetermined **performance indicators**, concerning consumption, impacts, and characteristics of the environment influenced by the organization. Once objectives and possible targets are set, the program can be elaborated. The program shows the procedures used to achieve the objective, and details the specific actions to be carried out to achieve the objective, relative responsibilities, relative times, necessary resources, costs, conditions to be observed, verification procedures, and whatever could be necessary or simply useful to ensure a clear and unambiguous operating reference. The program must include:

- the designation of the responsibilities related to objectives achievement (and targets) in all organization tasks and levels to be involved;
- Necessary resources and lead times.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 15 of 25
Issue date: 21.02.2014		

The following documents have been inserted in the system structure in compliance with what described (Table 7):

Doc. Code	Name	Meaning
MDA_4.3.3	Objectives and targets,	Setting objectives and planning for their achievement constitutes the cornerstone and the most qualified and qualifying EMS circumstance.
MMA_4.3.3-B	Register of objectives, targets and verification;	Setting data relative to times, intermediates targets, responsibilities for the execution of individual operations, performance indicators and action programs
MMA_4.3.3-A	Program objective	Description of the actions and operations that will lead to the achievement of the specific individual objective

Table 7 Documents for the Objectives planning.

4.4 IMPLEMENTATION AND OPERATION

Describing the structure of the management system is the aim of this section, in order to ensure that the entire business management complies with requirements of the standards chosen as a reference and with applicable laws.

4.4.1 RESOURCES ROLES AND RESPONSIBILITIES

Management has defined a business Organizational Chart that provides hierarchical and functional responsibilities and relations.

The employer will define roles for the Environmental Management System, top management chooses to appoint a Representative from Top Management for the environment sector consistent with Responsible of the Management System of the Environment sector (RSGA). The top management entrusts the following responsibilities to these roles:


- Ensures that the entire system is defined, applied and kept active, complying with ISO 14001 requirements;
- Reporting to Top Management on system performances;

The re-examination of the organizational structure occurs yearly, when there is management re-examination or when there are events that determine its need (for instance resignations, or task changes, roles and responsibilities for business opportunity.)

4.4.2 COMPETENCE, TRAINING AND AWARENESS

The company has established training and an awareness activity addressed to the staff at all levels to keep it informed and aware. The awareness and training have been later extended to all business stakeholders with particular attention to those that operate continuously for, with and within company perimeter. This vigorous activity involves:

- The importance of complying with:
 - Environmental Policy and its objectives,
 - Management system requirements (procedures, operative instructions, etc.);
- Risks associated to line of own activity;
- Potential consequences of non-compliance with procedures and the operative practices explained and adopted by the system;

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 16 of 25
Issue date: 21.02.2014		

- Their own role and responsibilities towards achieving compliance with policy, procedures, and system requirements, preparation and ability to react to emergency situations included;
- Procedures and instructions to carry out activities of own competence safely;
- Procedures concerning first aid, fire prevention and evacuation.

The development and growth of skills of the organization's human resources occurs through specific educational and training paths carried out by the company or external structures and provided through managerial and operative training programs.

To ensure that the staff for all tasks is appropriate to its role, the Environmental Management System Manager:


- Identify necessary skills to staff;
- Plan participation to training courses;
- Assess the effectiveness of the educational/training activities to which their colleagues have participated;

The procedure on training and awareness subject will involve the following steps:

- 1) Setting responsibilities (also through delegations and/or assignment of tasks);
- 2) Procedures and identification process of the required competences/training needs;
- 3) Planning: how to identify training needs, taking into accounts required competences and information on existing situation; how and where to find this information; developing a program (contents, distribution procedure, identification and training of the teachers, preparation of the teaching material, offices where training is carried out, registrations, training verifications, verifications of program applying and information system);
- 4) Quality assessment and effectiveness of training procedures; Possible formal qualifications, their management and expirations, control of expirations. As for formal qualifications, always referred to specific people, is meant to formally certify the occurred acquisition of certain skills by interested people. Normally formal qualification has an expiration, established by management, that must be renewed on expiry, naturally on the basis of appropriate verifications (in other words, it is similar to a driver's license);
- 5) Management of the information concerning training/information system; registration procedure; verifications of program application; possible identification of performance indicators and data for the management;
- 6) Re-examination of the subject at Management Re-examination.

The following table reports system documents that apply to the subject of the education, training, consciousness and awareness of the environment, health and security protection applied by Sterling.

Doc. Cod.	Name	Meaning
MDA_4.4.2	Contents of the basic education courses	Basic training that each employee must have to be able to be active element in the management system and operative element for the company
MPA_4.4.2	Training	Setting procedures and education planning
MMA_4.4.2-A	Training plan	Yearly education program approved by Management

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 17 of 25
Issue date: 21.02.2014		

MMA_4.4.2-B	Training Attendance Record	Annotation of the education and monitoring register about expirations and renewal
	Education and training request	Request to the management to be able to carry out education courses not included in the yearly program approved at re-examination
	Internal education sheet	Form used for instruction by an internal teacher
	External education sheet	Form used for instruction by an external teacher

Table 8 System documents for setting procedures of the staff education/training.

It is the will of the company to integrate the HSE management system as much as possible with the quality one, in the education range through use of certification forms of the occurred education and education request.

4.4.3 CONSULTATION AND COMMUNICATION

This section has the following objectives:

- To make staff aware and involve in the management of the environmental aspects;
- To establish and keep active procedures for regular communication, , data and information concerning the compliance with requirements of the mandatory and voluntary standards, re-examination and supervisions results among these to all stakeholders;
- To ensure regular and transparent dialogue with stakeholders.

For this reason the Sterling Company considers appropriate to:


- Communicate within the organization information concerning own significant environmental aspects;
- Communicate among the various levels within the organization dangers of security on environmental and system subject;
- Communicate to contractors, suppliers and visitors dangers and risks to which they are exposed and expose the organization;
- Receive, record, and answer communications of the external stakeholders on environmental, health and security subject.

The operative procedures for communication indicated above are specified in the procedure **Notification Management, MPA_4.4.3-A**.

Especially in environmental field the company defines how to manage communications, both internal and external, concerning the characteristics of own activities that may affect environment, in order to:

- Show company's commitment to the environment;
- Deal with the topics and problems related to environmental aspects of organization activities and services;
- Raise awareness to environmental policies, objectives, targets and environmental program of the organization;
- Inform internal or external stakeholders of the organization's system and, if considered appropriate, achieved performances.

The environmental communication aims to communicate appropriate information across to employees and all external stakeholders on the environmental aspects and environmental management system of the organization, with the dual purpose of motivating staff and facilitating understanding and recognition by public of the Company efforts to improve its own environmental performance.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 18 of 25
Issue date: 21.02.2014		

For this purpose the company will have management procedures for the collection of the reports, their examination and subsequent filing.

In addition, a continuous channel of oral dissemination of the information relevant the environmental management and environment in general is kept.

4.4.4 THE DOCUMENTATION

The Sterling Company believes that an Environmental management System must be documented to be effective and the documentation must be updated continuously. The purpose of the following section is the identification and management of system documentation in order to describe activities. Flows, procedures, responsibilities that the organization has established in order to apply and keep the management system active follow the principle contained in the policy.

The company proposes to manage its own documentation both in a controlled form (prevailing procedure) and non-controlled. This manual is distributed within and outside the company in controlled form as the other available documents there, stored by the heads of the management systems in a specific archive. If needed, some copies of this manual, Environmental Policy and/or other documentation relative to EMS can be distributed outside in a non-controlled form: if this happens, it will have to be highlighted on the cover of the distributed document, by an appropriate marking. Each document managed in controlled form (manual, procedure, instruction, basic document, and forms for recording) is provided with identification marking, date, signature by AD for approval, revision number, title, type of document. Whenever factors occur to make a document no longer functional or obsolete, the organization is committed to apply relative changes promptly and distribute these documents to stakeholders updated and revised, providing to withdraw older version of the document by them.

For this purpose Sterling has adopted this manual, basic documents, procedures and other detailing documents to describe elements of the Environmental Management System and their interrelationship. The EMS documentation describes, in form and in substance, the system developed within the organization and its necessity in order to involve all people whose actions (or omissions) can cause significant environmental impact.


4.4.4.1 RESPONSIBILITY

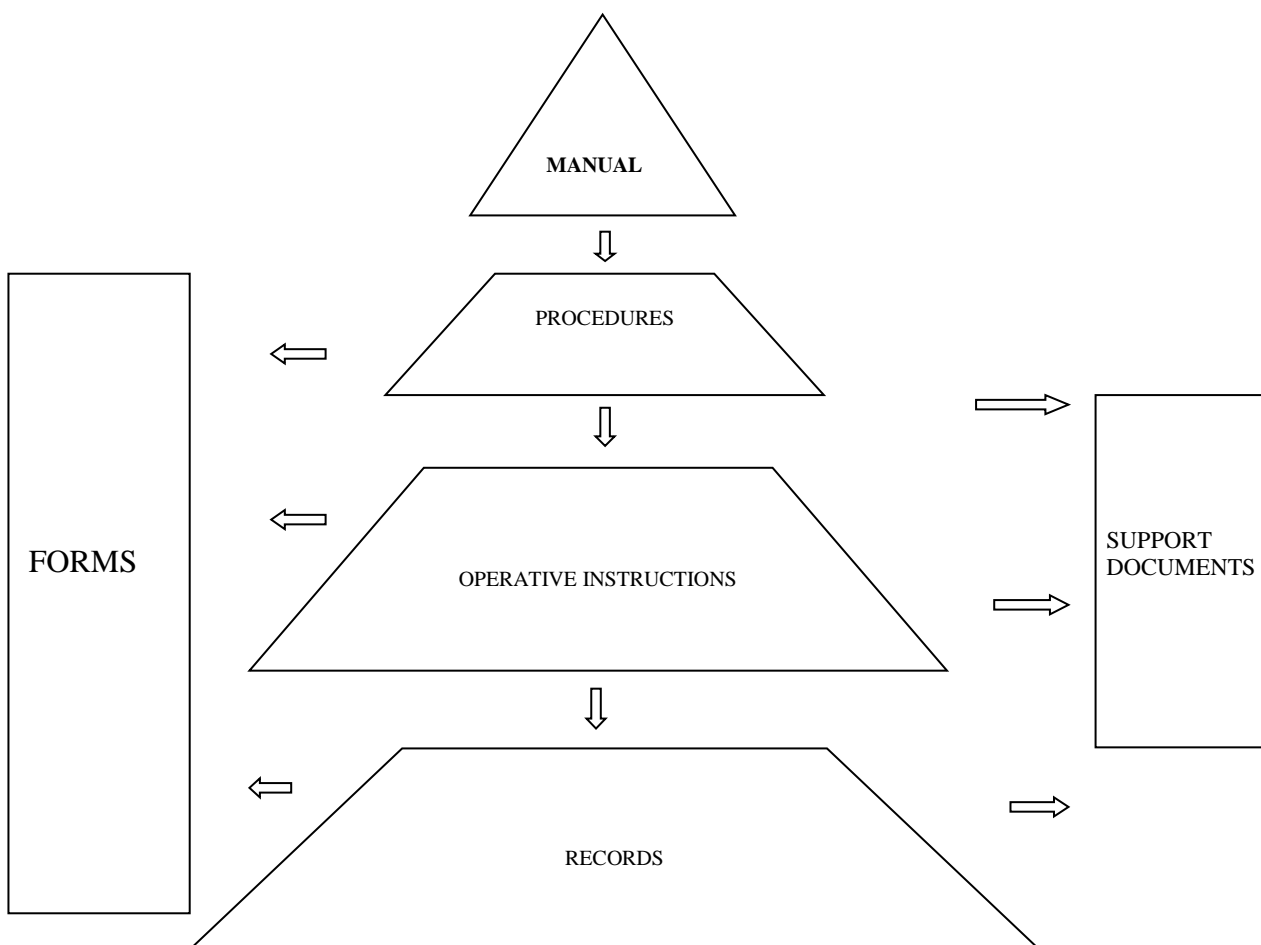
Documentation processing of the management system is task of the RSGA, or a colleague he has placed in charge, in collaboration with the heads of the current system in Italy to facilitate the collaboration in identifying the integrations of the needs found in the common procedures or operative instructions. The documents are surely revised yearly during Re-examination but also whenever the need is expressed to change or renew a work procedure.

4.4.4.2 SGA DOCUMENTATION

The basic documentation of reference of the company, to make the management and the application of the Environmental Management System organic, is planned on different levels described below.

In order to efficiently manage system documentation in the processing, verification, approval and distribution phases, this documentation is developed on four levels:

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 19 of 25



Flow Chart 1 Flow diagram and reciprocity of the system document.

System manual

The manual is the System's description document: it is edited and verified by the Responsible of the Environmental Management System and approved and made operative by the Top Management.


The manual represents the document that describes general organizational criteria and constitutes a constant reference for system application and updating.

Basic documents

The basic documents represent the main cornerstones of the management system, from which procedures and the other detailing documents of the management system are developed. Some examples are "Objectives, targets, programs and indicators", "Significant environmental aspects", "Environment and security policy", "Summary list of the existing documentation".

Management procedures

Define procedures and responsibilities related to the activities carried out that have or may have effects on the environment or security. The procedures are edited by RSGA, verified and approved by Top Management.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 20 of 25
Issue date: 21.02.2014		

Operative Instructions

These documents describe in detail the procedures to perform some activities that have or may have direct or indirect effects on the environment or security and also possible interventions to prevent and mitigate the environmental impact arising from emergency situations.

The operative instructions are edited by RSGA, verified and approved by the Security Officer and by Top Management.

Plans

Define procedures for applying specific activities that are carried out repeatedly and periodically. Their frequency is defined upon re-examination or within these procedures. The plans report planned actions, responsibilities, timings and resources.

A complete and updated list is included in the document MDA_4.4.4.

Programs

Identify procedures to apply specific actions to be carried out in time lapse; the programs report planned actions, resources, responsibilities and timings.

Registrations

These are registration documents referred to the manual or other procedures that underline management system application.

The collection of all applicable laws and standards and possible external documentation is also added.

4.4.5 DOCUMENTS MANAGEMENT

The main purpose of the Environment and Security Management System documents is to provide a correct description of the system. For this reason the organization defines procedures that considers necessary for the emission, approval, distribution, storage and update of the documents, (**MPA_4.4.5 Control of Documents and MPA_4.5.4 Control of Records**).


The general index of the SGAS documents is reported on the basic document **MDA_4.4.4**.

To ensure carrying out and control of the activities related to the documents management and production procedures will be activated to keep under control this aspect of the organization, in order to ensure that:

- The documents are identified;
- The documents are periodically reviewed, revised and approved for their adequacy;
- The obsolete documents are promptly removed and separated from the current documents;
- Procedures and responsibilities are defined for the emission and change of different types of documents.

The documents must be readable, dated, easily recognizable, put in order and stored for a pre-fixed term.

The documents management in controlled and not controlled form is referred to the procedure **MPA_4.4.5, Control of Documents**

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 21 of 25
Issue date: 21.02.2014		

4.4.6 OPERATIVE CONTROL

In order to plan all the activities associated to the significant environmental aspects and health and security requirements, Sterling Chemical Malta Ltd has defined procedures and operative instructions to prevent situations where the absence of these documents could cause non-compliance with what has been declared in the environment and security policy.

The Sterling Company establishes and updates procedures for the activities control that may significantly affect the environmental aspects identified in the “Significant environmental aspects” register and health and security requirements identified in its own documents of risks assessment.

The need to establish specific instructions is closely linked to:

- Company’s activities that may lead to a deterioration of environmental conditions;
- Maintenance of machinery;
- Use of materials potentially impacting the environment or health and security, their incorrect identification could influence the behaviour of the staff that uses it.

The operative control documents are edited by RSGA.

The documents related to operative control both at the procedural and instructions level are indicated in the basic document “**Summary list of documents, MDA_4.4.4**”

4.4.7 PREPARATION AND RESPONSE TO EMERGENCIES

The company has arranged and applied a **Preparation and response to emergencies (P_4.4.7)** procedure to assess the necessary behaviour in case of accidents and emergency situations. The procedure for managing emergency situations is edited by the Firefighting Officer in collaboration with the health and security Manager RSPP, RSGA and the staff straight involved in the activity that may have caused an emergency situation; it guides and trains company operators to quickly respond to incidents, emergency situations and operative abnormal conditions that may cause impacts on the environment. The need for this procedure is identified considering the **Significant environmental aspects (MDA_4.3.1)** and the **Emergency plan (MDS_4.4.7-A)** registers.

Documents allow the system to identify:

- Scenarios of the environmental and security emergency that may occur;
- Site area affected;
- The environmental and security impact that may be caused.


In addition, the organization has arranged a **Register of emergencies and incidents (MR_4.4.7-A)** where emergency situations that occur from time to time are recorded.

The RSGA is the supervisor who reviews and revises the existing procedure keeping into account the dynamic updating of the documents indicated above and effective occurrence of emergency situations.

In order to allow the correct implementation of response activities to emergencies provided by the procedure, RSGA contributes to develop specific training plans for the staff to allow this to have necessary competences for carrying out activities and use of equipment and tools if necessary. However security section takes care of these plans.

4.5 CHECK

Checks and verifications within the management system allow detecting critical situations and activating the consequent corrective actions. According to ISO 14001 standard (clause 4.5.1), the

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 22 of 25

organization “must establish, apply and keep active one or more procedures to regularly monitor and measure the main features of its own operations that may have a significant environmental impact”. This includes information related to performances, operative controls and compliance with objectives and targets. The monitoring equipment is calibrated and maintained.

If possible parameters related to the work environment (e.g.. noise, presence of asbestos, etc.) or processing environment are critical based on a Health, Security or Environmental point of view, they will have to be conveniently monitored, also through automatic alarm systems, where possible.

The clause covers:

- Inspection and monitoring programs, or their check;
- environmental program evolution;
- Checks and performance measures (indicators, etc.),

4.5.1 MONITORING AND MEASUREMENT


The words “monitoring and measurements” are mainly referred to the collection, measurement and checking of physical data, assessment and progress of health, security and environment programs, acquisition of information (also qualitative) useful for this purpose. The company develops and adopts the **MPA_4.5.1, Environmental monitoring and evaluation of compliance** procedure for management in collaboration with the security system. It ensures monitoring of the main activities and operations that may have significant impact on the environment, health and security in the work place. In this procedure the following issues will have to be faced:

- Setting responsibilities (if needed also through enactment of proxies and/or tasks assignment), if needed, by appointing responsibilities of check to people different from those having executive responsibilities
- The planning checks that involve procedures and the frequency of checks
- Procedures related to the calibration of the relevant equipment (if not included in other procedures of SGA or Quality system)
- Requirements requested to possible external laboratories or professionals who are entrusted a measure of relevant data
- Definition of the performance indicators, or at least criteria by which performance indicators are set
- Controls related to the program (objectives, targets, times, costs, resources, etc.)
- Actions to be taken if negative results on the controls occur, with the involvement of the appropriate levels
- Possible links to the N/C procedures

4.5.2 ASSESSMENT OF COMPLIANCE WITH REQUIREMENTS

The company develops and adopts the **MP_4.3.2 legal requirements and other requirements P_4.3.2**, procedure to periodically check and assess compliance with laws and environmental and security regulations applicable to organization activities.

Registrations of these assessments must be saved.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 23 of 25

4.5.3 NON-COMPLIANCE, INCIDENTS CORRECTIVE ACTIONS AND PREVENTIVE ACTIONS

The Company Sterling develops and maintains active procedures to identify non-compliance situations, with requirements dictated by EMS, called “non-compliance”. These situations can be pointed out after the conclusions collected during the measurement, monitoring, audit activities, and noticed by any business role and communicated to the person in charge /section head of reference and classified based on the importance that their effect can have on the environmental, health and security impacts and on the continuous improvement of the system. Identified non-compliance is solved through the execution of specific processing activities, in order to contain effects and reduce or mitigate impacts. The management procedures of non-compliance are described in the “**MPA_4.5.3 Enquiry, Complaint, Non conformity Handling**” procedure.

From the analysis of non-compliance, incidents or near misses there may be the need to activate corrective actions, to be able to remove the causes, in order to prevent the repetition of what caused the non-compliance. The identification of corrective actions and responsibility of their management is set by the frequency of non-compliance occurrence and by the importance of non-compliance in the EMS operation.

In order to prevent the occurrence of potential non-compliance, preventive actions may be thought and applied, called this way because they are born with the purpose of anticipating the occurrence of a problem, also including in this concept problems about Environment Management System of the organization.

After closing corrective and/or preventive actions, their efficacy must be revised.

The plans of corrective and preventive actions head the organization to the planning and execution of the actions checked during their applying to ensure the efficacy of the intervention.

Operative procedures for managing the corrective and preventive actions “**MPA_4.5.3 Enquiry, Complaint, Non conformity Handling**”.

4.5.4 RECORDS CHECK

Registrations are all those documents that constitute written evidence of the occurred compliance with certain fulfilments of the organization (for instance, possible chemical analysis, photometric surveys, reports of training courses, audit and revision reports).

These registration documents allow to:


- show compliance with the needs of the Environment Management System;
- record the achievement level of the expected objectives about environmental indicators conveniently chosen;
- arrange data to monitor processes that affect environment and security.

This data allows developing environmental and security indicators necessary to set company objectives.

The company Sterling has edited an appropriate procedure for managing registrations (**MPA_4.5.4, Control of Records**).

4.5.5 INTERNAL AUDIT

The company Sterling will have to plan and apply internal audits to assess if EMS complies with what has been planned for environmental management, including requirements of the UNI EN ISO: 14001 standard of reference. The audits allow checking if the organization keeps EMS

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
Issue date: 21.02.2014		Page 24 of 25


active, in addition, they provide Top Management with information on results achieved in order to ensure their continuing adequacy and efficacy.

The audit has the following objectives:

- To establish the compliance or non-compliance with the EMS elements from requested requirements of the standards;
- To check the correct EMS application and maintenance and its efficacy in pursuing objectives and targets;
- To provide a systematic and documented tool of verification to improve EMS;
- To identify areas of potential EMS improvement;
- To assess the ability of AD re-examination to ensure dynamic system management;
- To set improvement activities.

The audit preparation and execution is carried out with the procedures reported in **MPA_4.5.5, Internal audit**

The audits are conducted by qualified staff, independent from the activities, subject to verification in collaboration with RSGA. The requirements identified by Sterling for obtaining the qualification to carry out internal audits are indicated in Procedure **MP_4.5.5 Internal audits**.

	<h1 style="text-align: center;">ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL</h1>	Identification: MEMS
		Revision 00
		Page 25 of 25
Issue date: 21.02.2014		

4.6 TOP MANAGEMENT REVIEW

At regular intervals, Top Management reviews the Environmental Management System to ensure that it continues to be effective and appropriate to the features of the organization.

The re-examination activity must be preceded by an activity of collection of the information available and potentially useful to the re-examination carrying out. Information and data for carrying out Re-examination are provided by the RSGA.

The EMS re-examination includes the following inputs:

- Results of internal audits and assessments regarding compliance with legal and other requirements signed by the organization;
- communications from external stakeholders, including complaints;
- the results of participation and consultation;
- the environmental performance of the organization;
- the level of objectives and targets achievement;
- the status of the accidents surveys and corrective and preventive actions;
- the progress of the actions expected based on previous Top Management re-examinations;
- the change of circumstances (also legal and other requirements);
- advice for improvement.

Output from the Management re-examination must be consistent with the organization's commitment to the continuous improvement and must include the decisions and actions related to possible changes regarding:

- a) Environmental system performances;
- b) Policy and objectives
- c) the resources
- d) other elements of the management system.

During the re-examination the possibility of changing the policy, objectives and the other system elements is assessed, in the light of system audits, changes in the situation, and requests from external stakeholders and consistent with a commitment to continuous improvement.

This re-examination activity is indicated in the **MPA_4.6, Management Review** procedure.

The relevant outputs of the Top Management re-examination must be available for communication and consultation (see **4.4.3**).