



Guidelines

for the Assurance of

Safety, Health and Environmental Protection in the Roche Group

2007 Edition – supersedes the 1997 edition.

Obligation to Society

Excerpts from the Roche Corporate Principles, February 25, 2003:

Mission

Our aim as a leading healthcare company is to create, produce and market innovative solutions of high quality for unmet medical needs. Our products and services help to prevent, diagnose and treat diseases, thus enhancing people's health and quality of life. We do this in a responsible and ethical manner and with a commitment to sustainable development respecting the needs of the individual, the society and the environment.

Values

We want everyone in the organization to work under optimal conditions of health and safety.

We want to maintain high ethical and social standards in our efforts to protect the environment.

Commitment to the Environment

As part of our commitment towards sustainable development we proactively seek to employ new, more sustainable technologies and processes and to minimize our impact on the environment.

Therefore our mission for safety, health and environmental protection is:

We ensure business continuity by managing Safety, Health and Environmental matters with the same sense of responsibility, and just as methodically, as issues concerning quality, productivity and cost-efficiency.

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Abbreviations

- SHE = Safety, Health and Environmental Protection. This is the abbreviation for the corresponding topics. See also chapter 1.2.
- CSE = Corporate Safety, Health and Environmental Protection. This is the abbreviation for the SHE organizational unit on the Corporate level. It includes CESA (see chapter 3.6).
- CESA = Corporate Environmental and Safety Affairs (see chapter 3.6).
- SEO = Safety, Health and Environmental Protection Officer = SHE Officer.

Remark: There is no keyword index in this document. Keywords can best be found by using the Find-function in the electronic version of the document.

1. Introduction

Safety and health protection at all workplaces, together with protection of the surroundings and the environment are principal concerns of the Roche Group's management. They are main elements of a sustainable development, as pursued by Roche.

Safety, health and environmental matters are handled with the same sense of responsibility, and just as methodically, as issues concerning quality, productivity and cost-efficiency.

Safety, health and environmental protection concerns are an inseparable part of every activity. Department supervisors are responsible for ensuring that these issues are well managed. They are accountable for knowing what can be expected of employees in terms of know-how and skills and the technical and organizational measures that are required.

Every supervisor and specialist must be familiar with the laws and regulations applicable to his or her area of responsibility, as well as with internal guidelines and directives, and with recognized technological codes and implement them accordingly.

All employees have a personal responsibility, in accordance with their level of knowledge and ability, to ensure that safety, health and environmental protection regulations are observed.

1.1 Purpose of the Guidelines

Based on the *Roche Corporate Principles* the *Policy on Safety, Health and Environmental Protection in the Roche Group* was adopted by the Corporate Executive Committee. This policy document was revised and published in 2005; it builds on earlier editions (1980, 1991, and 1996).

In addition to the principles stipulated in the *Policy on Safety, Health and Environmental Protection in the Roche Group*, Roche also adheres to the guidelines of various international bodies. For instance, Roche has signed the Charter for Sustainable Development of the International Chamber of Commerce (ICC principles on environmental management). Roche is committed to comply with all legal requirements and the pertinent international conventions in every country where we operate.

The present *Guidelines for the Assurance of Safety, Health and Environmental Protection in the Roche Group* are oriented to the ISO 14000 ff standards.

The main purpose of these Guidelines is to define clearly the corporate provisions and requirements which are both necessary and suitable for practice-oriented implementation of the principles of the *Policy on Safety, Health and Environmental Protection in the Roche Group* and the above-mentioned international programs.

As a supplement to these guidelines, CSE, CESA or local SHE organizations may issue special documents (e.g. guidance notes, directives) on specific topics. In carrying out their work, supervisors and specialists must therefore, in addition to meeting all legal requirements, observe not only the *Guidelines for the assurance of Safety, Health and Environmental Protection in the Roche Group* and the local SHE handbook, but also such additional documents on specific issues.

1.2 Scope

This publication has Group-wide validity. It is applicable to all Roche Group Companies and Sites. SHE matters regarding third parties are covered by the *Roche Guidelines on Dealing with Suppliers and Service Providers* (part of the *Roche Code of Conduct*) and the Corporate SHE directives K13 (*Dealing with Contractors*) and K15 (*Dealing with third party manufacturers and service providers*). In order to account for the variety of businesses within the Group, provisions on local organization and processes are formulated in a generalized manner. Companies and Sites must therefore regulate specific aspects in a local SHE handbook in line with their local organizational form and particular circumstances.

SHE stands for *Safety, Health and Environmental Protection*, which comprises all issues and activities in these areas, including security. It does not address safety issues in the intended use of our marketed products.

Relevant topical areas are exemplified below, though the list is not exhaustive:

- **Safety**
 - Operational safety
 - Employee safety
 - Accident prevention
 - Building and plant safety
 - Process safety
 - Risk management
 - Emergency management
 - Safety of chemicals and biological materials
 - Handling
 - Storage
 - Transport
 - Safety data, documentation
- **Security**
 - Personnel
 - Physical assets
 - Products
 - Knowledge
 - Information (not covering core IT security like data access control, firewalls, virus protection etc.)

- **Health**

- Health protection at the workplace
 - Industrial hygiene
 - Occupational toxicology
 - Occupational medicine
 - Accident prevention
 - Ergonomics
 - Stress
 - Biosafety
 - Radiation protection
 - Noise
- Health promotion

- **Environmental Protection**

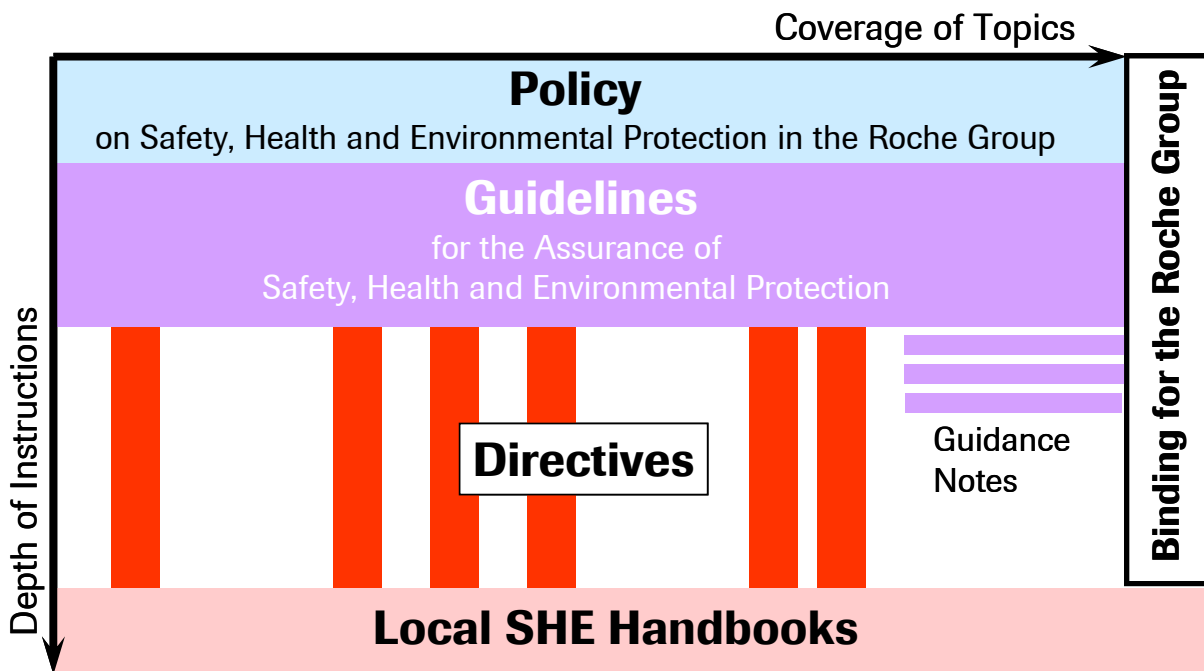
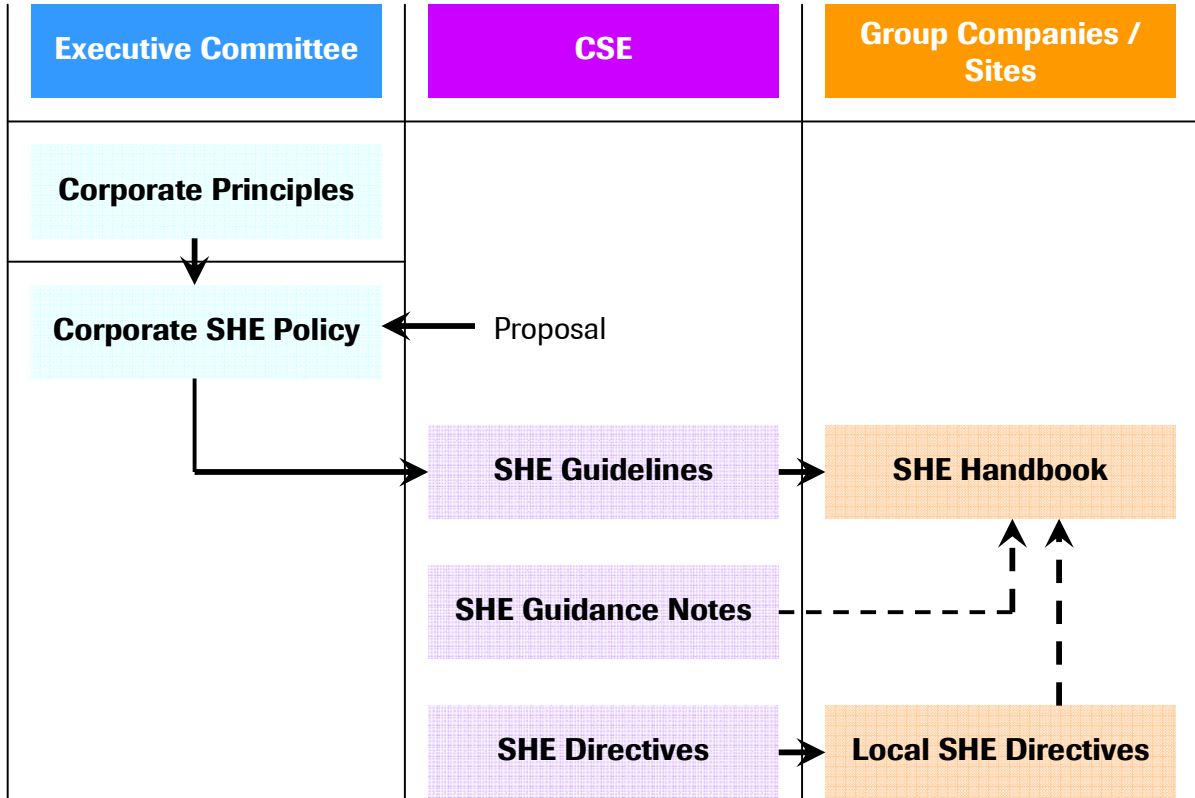
- Emissions
 - Into the air
 - Into the water
 - Into the soil
- Waste
 - Avoidance
 - Re-use, recycling
 - Disposal
- Resources, including energy
 - Efficient use
 - Change to best alternatives
 - Eco-balance
- Noise
- Remediation of existing contamination

1.3 Management Cycle

The management of SHE issues should be structured and clearly communicated. For this reason we encourage the use of a framework that includes each of the basic steps in a management cycle (e.g. according to ISO 14000).



1.4 Hierarchy of Documents in SHE



Guidance notes provide specific instructions valid only for certain parts of the organization (e.g. specific guidance for research).

Directives are explicit instructions on selected topics (e.g. on energy management). They are binding for all Roche and must be followed in detail (except if provisions are prohibited by local laws). Directives do not cover all SHE topics.

In accordance with the *Policy on Safety, Health and Environmental Protection in the Roche Group*, all Group Companies and Sites are required to prepare and maintain **local SHE handbooks**, which form the basis for the SHE management at the Site. These handbooks must describe in detail the implementation of the *Guidelines for the Assurance of Safety, Health and Environmental Protection in the Roche Group* at the local level. In particular, the handbooks should indicate where additions or modifications must be included based on local conditions (see following list).

The following elements should be included in the local SHE handbook (existing documents can be referenced). These elements constitute the minimum necessary corporate requirements. Additional formal requirements are necessary for certification according to ISO 14000 or EMAS, and they also may be necessary for local legal reasons. Additional documentation requirements are described in the SHE directives.

Introduction	- Glossary: definitions, abbreviations, terms
Site description	- Description of activities - Site organization - Site plans
SHE Organization	- Name of manager responsible for the Site - Determination of Site-specific responsibilities for SHE (job descriptions, duties) - SHE organization charts - Organization of emergency response service
Legal aspects	- Catalogue of legal SHE regulations (laws, ordinances, provisions) - Catalogue of SHE related building and operating licenses - Catalogue of SHE related agreements with authorities (exemptions, extension of deadlines, etc.)
Communication	- Determination of rules for internal and external SHE communication
Measurements, data	- Catalogue of compulsory and voluntary data registration (e.g. emission and immission monitoring) - Processes for key data collection and reporting
Documentation	- Rules on documentation of SHE related data - Regulations on distribution, updating and filing of SHE related documentation (document control) - Catalogue of valid SHE documents - Cross references to other SHE related documents
Processes	- Description of all relevant SHE processes of the Site

Process specific SHE information and instructions must be made readily available for line employees, e.g. by providing this information in the standard operating procedures and work instructions.

2. Strategic SHE Objectives and Operational Goals

The *Policy on Safety, Health and Environmental Protection in the Roche Group* establishes the following strategic SHE objectives.

Roche strives to:

- establish itself as one of the leading companies in the healthcare industry
- continuously improve upon our high standards for safety, health and environmental protection
- promote SHE awareness among all employees and create the conditions for SHE to become a matter of course in their daily work
- support active SHE communication including training
- maintain good relations on SHE issues with neighbors, authorities, customers, suppliers, shareholders and the public
- continually reduce the ongoing and episodic environmental impact from our operations
- actively manage the entire SHE risk portfolio
- identify and resolve unacceptable risks at an early stage
- continue efforts to further prevent occupational injuries and illnesses
- optimize the use of all materials and energies to improve the eco-efficiency and continually reduce environmental pollution and conserve resources
- provide security for our employees, workplaces, knowledge and products

Roche has established operational goals for the following key performance indicators (KPI):

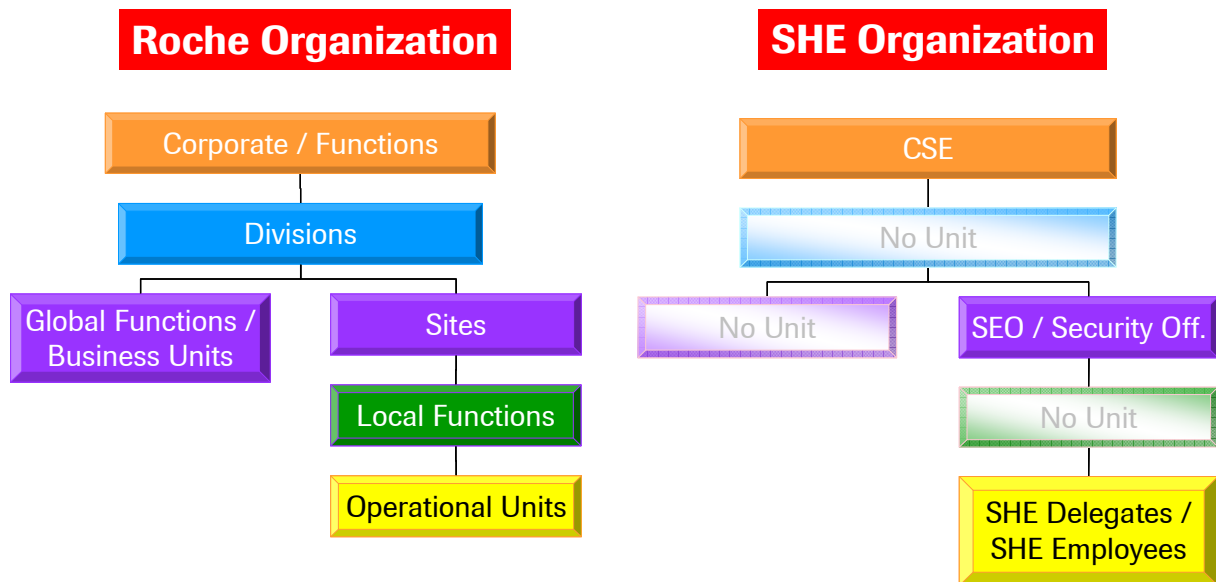
Goal	KPI
• Reduce accident rate	Roche Accident Rate, RAR
• Reduce general absence rate ¹⁾	lost workdays per employee per year
• Reduce energy consumption	GJ per employee per year
• Improve total eco-balance	environmental impact value per employee per year
• Reduce SHE risks	total value of risk inventory
• Optimize SHE education	hours per employee per year
• Improve SHE efficiency	SHE cost compared to Group sales
• Stay in FTSE4Good and DJSI ¹⁾	yes / no
• No relevant SHE fines	no fines > CHF 100'000

¹⁾ Combined goal with other sustainability areas

Specific quantitative measures for these goals along with corresponding time lines are developed and published in the Sustainability Report.

3. Organization and Responsibilities

3.1 General Organization of SHE



3.2 Corporate Executive Committee

The Corporate Executive Committee (CEC) determines the SHE policy on the basis of the *Roche Corporate Principles* and the *Roche Sustainability Charter*. The CEC defines the main organizational structures and designates the functional responsibilities necessary for implementing the SHE policy. In addition it supervises compliance of the entire organization with this policy.

Safety, health and environmental protection are principal parts of a sustainable development and therefore main topics handled in the Corporate Sustainability Committee (see <http://www.roche.com/home/sustainability.htm>).

3.3 Committee of the Board of Directors supervising SHE

The assigned sub-committee of the Board of Directors is regularly informed about the status of SHE in the Roche Group, the SHE goals, the trends of the corresponding key performance indicators, the main SHE issues (past and foreseen), the SHE risk situation and the exposure of the Roche Group to new SHE issues and trends. This Committee provides general guidance regarding SHE and actively engages itself if the SHE status, trends or risks are deemed unsatisfactory.

3.4 Heads of Divisions, Business Units and Global Functions

The heads of divisions, business units and global functions consider economic, environmental and social (including worker) impacts when taking business decisions. They support their organizations in their SHE tasks and duties, in particular by

- delegating the necessary powers and authority to them
- approving the necessary budgets
- ensuring that SHE due diligence is conducted on all property transactions including acquisitions, joint ventures, leases and sales of property

3.5 General Managers, Site Managers

The General Managers (GM) of Roche's Group Companies and the Site Managers (SM) (managers responsible for a Site) are responsible for all aspects of safety, health and environmental protection in the areas under their control. On the basis of the *Policy on Safety, Health and Environmental Protection in the Roche Group*, these Guidelines and the Group SHE Directives, they adopt the local SHE handbook, establish the local SHE organization and assign responsibilities. The name of the manager responsible for a particular Site and of the persons in charge of SHE must be provided in the local SHE handbook.

The SHE tasks and duties of the managers responsible for a Site are listed below. The General Manager or Site Manager, while remaining responsible for SHE, may delegate certain tasks to the line managers and certain tasks to the local SHE officer.

- implementing the corporate SHE Policy and Guidelines
- defining the local SHE organization and assigning relevant tasks and responsibilities
- establishing accountability for SHE performance and goal attainment with direct reports
- promoting SHE awareness among employees at all levels, especially regarding the relevant legal regulations and in-house SHE provisions
- ensuring compliance with local legal regulations and with Roche SHE provisions
- allocating sufficient resources to support effective SHE training
- defining local SHE objectives and goals, based on the Group SHE objectives and goals
- defining and implementing action plans to address SHE objectives and goals
- ensuring that a risk analysis process is established and that identified risks for all relevant assets, workplaces and processes are adequately communicated and managed
- compiling the corresponding risk inventory (risk register)
- ensuring and implementing an adequate and consistent security strategy for the Company or Site
- setting up and training of an appropriate emergency management organization in line with local risks, clearly defining responsibilities, powers and procedures
- establishing an external communication process to ensure good relations with neighbors, stakeholders and the public regarding SHE issues
- establishing a process to ensure that SHE due diligence is conducted on all property transactions including acquisitions, joint ventures, leases and sales of property

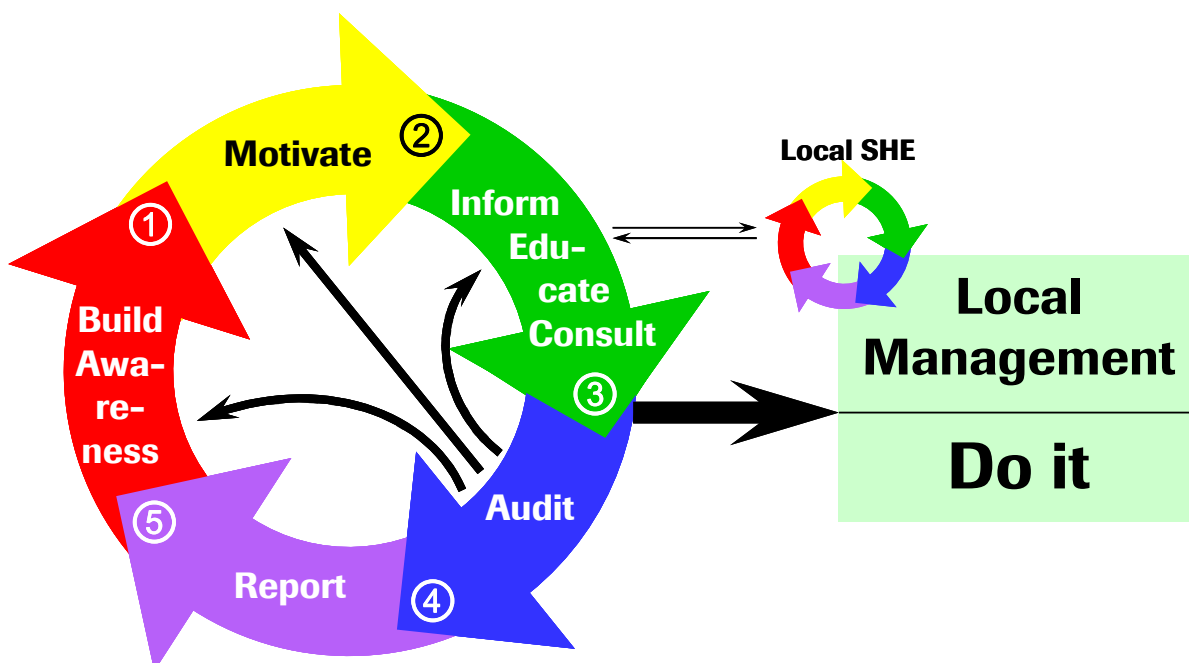
- ensuring that SHE-relevant incidents as well as situations where assistance is needed are reported to CSE / CESA and – where necessary – to the authorities
- preparing and updating a local SHE handbook
- ensuring that all employees are informed about and have access to the local SHE handbook and other relevant SHE information in line with their level of competence and responsibility
- periodically reviewing the local SHE management system
- ensuring that business decisions are sustainable and include consideration of economic, environmental and social (including worker) impacts
- implementing a system for management of change and for the review of capital and maintenance projects for SHE impacts
- determining Site-related SHE key figures and reporting them to CSE

3.6 Corporate Safety, Health and Environmental Protection (CSE)

CSE is a specialized corporate function which supports the Corporate Executive Committee in SHE matters. It has the following mission:

Set standards and regulate SHE matters. Support implementation by

- Building awareness
- Motivating
- Educating, Informing, Consulting
- Auditing, Checking
- Reporting

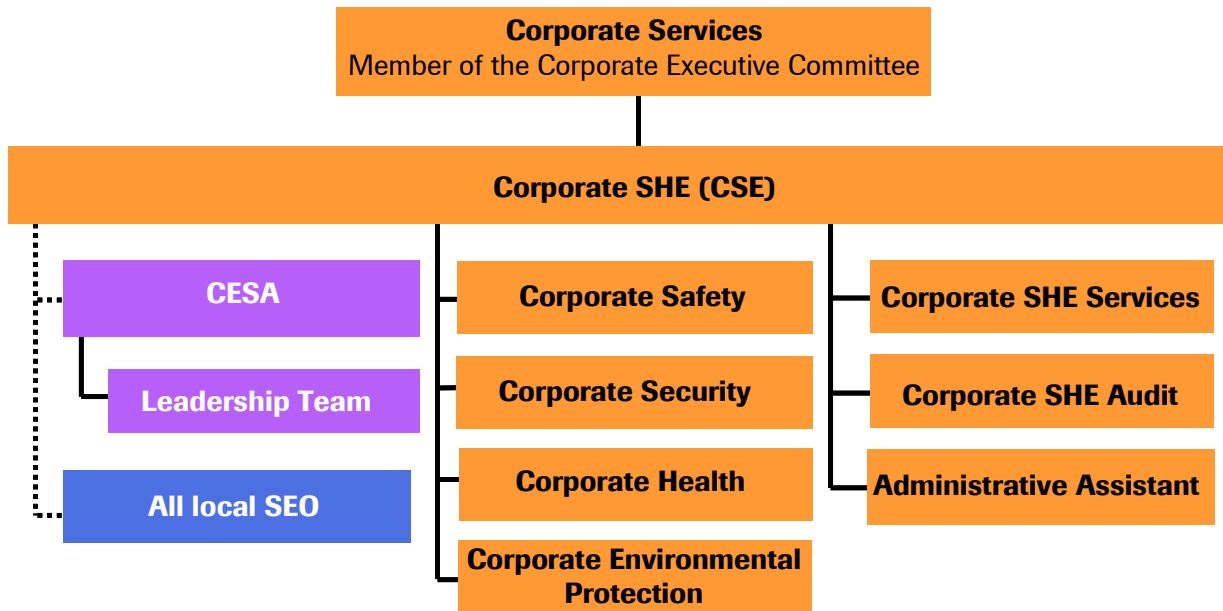


Tasks and duties include:

- formulating the corporate SHE policy on behalf of the Corporate Executive Committee
 - including periodic review and amendment as necessary
- issuing Group-wide SHE documents (guidelines, guidance notes, directives) in support of the corporate SHE policy
- identifying, monitoring and assessing the general developments in SHE worldwide and initiating necessary actions in response to emerging trends or specific SHE problems
- protecting Roche interests in governmental and non-governmental organizations, business organizations and scientific bodies while providing support in developing favorable solutions
- representing all SHE affairs in the Roche Sustainability Committee
- supporting the Group Companies and Sites in all SHE matters
 - training local SHE officers
 - discussing and assessing proposals from the Sites
 - identifying and communicating possible SHE solutions by providing the advantages and disadvantages of possible options (best practices)
 - arranging contacts with experts and colleagues
 - facilitating know-how exchange and benchmarking
- preparing relevant safety documents for chemical and pharmaceutical substances handled within the Roche Group (e.g. material safety data sheets, environmental risk assessments etc.)
- conducting SHE audits at Group Companies and Sites to review the status of SHE and local SHE management systems and ensuring follow-up
 - assessing the corresponding corrective action plans
 - monitoring implementation of the corrective actions
- performing due diligence to identify SHE risks and liabilities associated with property transactions (e.g. acquisitions, joint ventures, leases, sale of parts of our business etc.) in support of, and upon request from General and / or Site Management
- preparing a Group SHE risk inventory based on the local risk inventories and overall global risks
- collecting SHE key figures and other relevant information from the Group Companies and Sites
 - conducting plausibility checks
 - consolidating of the numbers on different levels
- coordinating corporate security programs and addressing security issues that cannot be resolved at a local level
- informing the Corporate Executive Committee and the Committee of the Board of Directors supervising SHE of the SHE status and the relevant SHE risks in the Group
- preparing the SHE section of the annual Roche Business Report
- maintaining Corporate SHE Internet and Intranet pages
- issuing Corporate position papers on important SHE topics, and SHE bulletins on critical issues

CSE is supported by the subgroup CESA (Corporate Environmental and Safety Affairs; located in the USA). This group coordinates SHE, with a special focus on ensuring legal

compliance, for all U.S. Sites (including Puerto Rico) in a similar way on behalf of CSE and conducts other tasks for CSE wherever necessary.



..... = functional reporting

———— = functional and administrative reporting

3.7 Divisional Eco-delegates

Each division nominates an eco-delegate. These eco-delegates address specific divisional SHE topics. In particular, they are responsible for identifying environmental-related challenges and opportunities in the divisions, and promoting and stimulating the relevant programs, activities and measures to address these challenges and opportunities. They report to the divisional management and work in close cooperation with CSE and CESA on technical matters.

3.8 Local SHE Organization, SHE Officers

Every Roche Site must designate a SHE officer (SEO) who is located at the Site. The SEO may be supported by a specialist SHE organization. Since the Site SEO needs to

- be as independent as possible,
- have direct, unfiltered access to the top management of the Site,
- have real oversight over the Site, and
- have influence on the whole organization,

he / she typically reports directly to the head of the site (exceptions to be discussed with and approved by CSE).

In respect of technical matters, the SEO reports to the head of CSE. Depending on a Company's size and the complexity of its operations, the local SHE organization may be expanded. At small Company Sites these tasks can be conducted by single employees as part of or in addition to their regular responsibilities.

The tasks and duties of the local SHE organization and the local SHE officer include:

- supporting and advising site senior and line management in SHE matters
- promoting SHE in the Company based on the local and global Roche SHE objectives and goals
- supporting the organization for compliance with local legal regulations and with Roche SHE provisions
- supporting line management in SHE training for employees
- developing and maintaining a system for receiving, documenting and responding to SHE related reports and complaints
- ensuring that a risk analysis process is implemented and documented
- conducting periodic SHE inspections
- reporting critical SHE situations
- monitoring and documenting
 - the implementation of SHE programs and action plans, especially SHE measures planned in order to close identified gaps
 - accidents and incidents,
 - occupational injuries and illnesses,
 - emissions due to the activities of the Company, especially related to soil, water and air pollution
 - the use of energy and raw materials and specifically regulated items
 - the status and progress of actions related to SHE goals and targets
- compiling and documenting the SHE KPIs
 - used for monitoring the trend towards the SHE goals
 - used by the management as a basis for their SHE plans
 - for SHE reporting
- reviewing and supporting the communication of SHE related information and documentation
- advising local (Roche external) emergency response teams in the event of incidents, including transport accidents involving Roche products
- establishing and maintaining the local (Roche internal) emergency management system
- managing financial provisions for legacy health and environmental liabilities, together with the finance department
- establishing and maintaining contacts with the local SHE authorities, professional organizations, scientific bodies and the public

There are often benefits from integrating local security into the specialist SHE organization, but it can also be a separate organization at the Site.

The specialist SHE organization and the SHE officer may assume certain additional tasks delegated by the General Manager or the Site Manager.

3.9 Line Managers, Supervisors

Roche places direct responsibility for initiating, implementing, monitoring and supervising SHE with the line managers of the various areas and departments - within the scope of their decision-making powers.

The tasks and duties of line managers / supervisors include:

- developing and maintaining knowledge of and ensuring compliance with company policies, guidelines and directives as well as local SHE regulations
- implementing SHE programs
- defining SHE goals and objectives in support of Site targets
- preparing and maintaining area-specific documents for the operation and maintenance of plants, installations, equipment and buildings as well as for production and other work processes; ensuring inclusion of safety, health and environmental instructions into work instructions and standard operating procedures (SOP)
- assuring that SHE training processes are in place, that employees are attending training, and that training is adequate for employees to conduct their job responsibilities
- providing all necessary SHE information to the employees
- assigning work in line with employee aptitude and training, and supervising working procedures
- setting an example for employees by frequently discussing SHE and intervening in case of unsafe work practices and conditions
- arranging for workplace risk assessments, industrial hygiene monitoring and periodic medical examinations of employees where / when applicable

3.10 Employees

Within their particular sphere of activity, all employees are expected to perform their duties to the benefit of the Company, using common sense and the best of their knowledge. They are personally responsible for SHE in line with their know-how, skill and experience. They are required to learn and follow all programs, procedures and instructions relating to SHE, to report unsafe conditions or acts and to inform their line managers / supervisors if they are uncertain or unable to deal with a particular situation.

3.11 Additional Positions with Safety, Security, Health and Environmental Protection Responsibilities

Specialists may need to be appointed for particular tasks or due to legal regulations in certain areas. They are responsible for the technical accuracy of their work. The line managers

are responsible for taking due notice of the information given and for the appropriate implementation of specialists' recommendations.

- **SHE Building Officer:** For larger sites with many buildings and a big number of employees it is recommended that for each building a person responsible for SHE matters is appointed. His or her tasks and duties should be defined in the local SHE handbook.
- **Occupational Health Services:** Each Group Company or Site must provide a medical service responsible for necessary examinations and evaluations that may be required by local regulations or by Roche provisions (including for prevention). In addition, this service should be available to treat employees who have been injured or become ill while on the job. This function may be outsourced.
- **Site Security:** The site must assess and assure that adequate security programs are in effect to address the physical protection of the plant, the control of contractors and visitors, the security of Roche employees, intellectual property and proprietary information and the transportation of high value shipments. SHE and security programs often overlap and the two functions must work closely and effectively together. The Company and Site management respectively are accountable for the security concept and the defined protection levels. Operational elements of Site security (e.g. security patrols, guards, etc.) may be outsourced to reliable companies.
- **Other Officers for Special Tasks:** Depending on local needs, regulatory requirements (including requirements defined by Roche Group Directives) and the nature of the hazards at the Site, some Group Companies and Sites may appoint
 - bio-safety officers,
 - radiation safety officers,
 - officers for toxic, addictive and / or narcotic substances,
 - transport safety officers, etc.

These roles must be included and defined in the local SHE handbook.

- **Onsite Emergency Response:**
 - A certain proportion of the staff of the Site should be trained as first aiders.
 - Depending on the local need, a number of employees may be trained as volunteer fire fighters and / or as members of local emergency response teams.

3.12 Third Parties

Whenever employees of outside companies (third parties) are working on Roche premises, a Roche responsible party must be designated and suitable measures must be taken to ensure that these companies

- have been pre-qualified to perform the work being requested
- work under the same standards of SHE as Roche personnel
- are properly supervised while on Roche property

Employees of these companies must

- have received instruction or orientation regarding the worksite, the SHE regulations to be observed, the emergency measures to be followed and specific permit procedures
- have the necessary knowledge about specific SHE requirements of their work (e.g. proper earthing/grounding, required air flow in a hood, proper lighting etc.)
- have a clear work order with clearly defined limits and information about related or nearby hazards
- be familiar with available safety and protective equipment (provided by the third party or by Roche) and are instructed in its use
- be familiar with and committed to observe the legal regulations and applicable Roche-specific SHE provisions

The local SHE organization is generally responsible for developing the SHE program to address outside companies and for gathering the KPIs of the outside companies (such as the Contractor Accident Rate). The Site Manager defines those responsible for the day to day supervision of the third party company on site. Detailed provisions are stipulated in Group Directive K13 (*Dealing with Contractors*).

4. General SHE Standards

4.1 Training

SHE training is essential in order to assure the necessary and desired SHE level. It provides employees with the knowledge they need to perform their work safely and effectively and must be adapted to the special circumstances and job functions involved. Line management is directly responsible for the training of their employees. Managers are required to designate the training that is required in order to perform the work and to mandate and track attendance at the training programs. All SHE training must be documented.

For SHE training of contractors see Chapter 3.12.

4.2 Communication

The Group Companies and Sites ensure internal communication in the field of SHE and the flow of information to CSE / CESA. They arrange for SHE information to be distributed to employees (including those working outside the premises, e.g. sales representatives) and contractors in line with their function and needs. These communication processes and regulations are to be established in the local SHE handbook.

External communication on local affairs is the responsibility of the managers of the local Group Companies and Sites. They must ensure that their statements be in line with the Corporate SHE policies and communication and be based on the general principle of open dialogue with all stakeholders. When questions arise, they contact Corporate Communications (CC) or CSE / CESA for advice. At Group level, Corporate Communications (CC) is in charge of external communication of SHE matters in close collaboration with CSE / CESA.

Group Companies or Sites can engage in SHE knowledge exchange and benchmarking with other companies or with professional associations. This is explicitly encouraged in order to maintain our high level of SHE competence, but participants must ensure that all antitrust requirements and other legal provisions are respected (refer also to the Roche Behaviour in Business regulations).

Group Companies and Sites maintain contacts with the authorities and exchange all required and otherwise useful information with them in the sense of open dialogue and cooperation, while fully complying with Behaviour in Business regulations.

Where necessary (e.g. for members of the local emergency management team) people in charge of SHE are trained in the principles of media communications.

4.3 Goal Setting, Performance Monitoring and Key Data Collection

Based on the principle of continuous improvement, SHE goals are established at all levels of the organization. Such goals must fulfill the criteria of SMART goals (specific, measurable, achievable, relevant, time based), and clear responsibilities must be assigned. Action plans for attaining the goals must be elaborated and implemented.

For the assessment of SHE performance and trends, key data must be collected according to defined rules and definitions and consolidated at various levels, including at the Corporate level. Legal requirements, authorities and rating agencies may also require this data.

SHE key figure reporting (as part of the annual Roche Business Report) is an annually recurring process. The system and the numbers are regularly verified by an independent third party.

If definitions given by CSE for corporate reporting do not satisfy national or local (legal) requirements, data meeting both definitions must be elaborated and reported accordingly. Such local definitions and the frequency and process of data gathering (including for Roche internal reporting) must be documented in the local SHE handbook.

SHE goals should be documented and measured as part of the performance management system.

4.4 Documentation and Document Distribution

SHE related data must be consistently recorded and reported and must be collected according to defined rules. These rules are to be listed in the local SHE handbook. Special attention must be paid to sensitive data (especially personnel data) and compliance with pertinent data protection requirements.

A process must be established to assure that documentation requiring periodic update is reviewed as necessary, and such made available as appropriate to employees, relevant authorities and government bodies. This process must include a document (paper and electronic) retention procedure that considers applicable legal requirements and the Roche records retention policy.

High value records must be maintained in a safe and secure location as long as it is beneficial to Roche.

4.5 Legal Aspects

Each Group Company or Site shall prepare – as part of the local SHE handbook – a list of all locally applicable relevant legal SHE regulations (laws, ordinances, orders, permits, agreements and conditions). This list must be kept up to date, made available and actively communicated internally as appropriate.

Compliance with all legal regulations must be ensured without exception.

4.6 SHE Management System

The system described in the Corporate SHE policy, guidelines and directives and the local SHE handbook and other SHE documents form the Roche SHE management system. This system corresponds to all relevant requirements of standard SHE systems such as ISO 14001, OHSAS 18001, SA 8000, EMAS, Responsible Care[®] and others. Roche does not require Sites to get certification regarding such management systems when they are not required by law, but Sites may wish to obtain such certificates based on local considerations.

Roche is committed to sustainable development. See the Roche Sustainability web page for details of the concept and its application at Roche (<http://www.roche.com/home/sustainability.htm>).

Roche also follows the principles of Responsible Care[®], an initiative of the chemical industry aimed at encouraging voluntary improvements in the SHE field. For details see <http://www.responsiblecare.org/>. The Sites are free to sign the corresponding charter in their country via the country's chemical industry association and thus also following all formal requirements of that charter.

4.7 Prevention

According to the *Policy on Safety, Health and Environmental Protection in the Roche Group* prevention must be the primary focus of all SHE measures and activities. Therefore, all reasonable technical, organizational and personnel measures should be implemented to ensure the personal integrity of all personnel and to prevent

- occupational injuries
- exposure to hazardous substances or physical strain
- explosions, fires
- substance releases / emissions
- damage to physical assets, and
- loss of critical knowledge

and to contain their potential consequences.

Risks should be eliminated or reduced as far as reasonably possible by substituting problem substances or by modifying processes, working procedures and installations (process-integrated SHE). As part of such prevention the SHE competency of suppliers, toll manufacturers, service providers and distribution partners must also be considered.

4.8 Risk Management

Roche has developed and implemented a systematic process to assess SHE risks for all its operations and activities. This process has been detailed in Group Directive K9 (*Risk Analysis*). The basic steps in this methodology are:

- Establish all necessary underlying data.
- Define the acceptable risk ranges in terms of people, environment and business (to be determined by the management).
- Systematically search for and identify hazards.
- Analyze exposure to these hazards and / or the probability that the hazards materialize, and their consequences.
- Define and characterize the resulting risks.
- Consciously determine (management) whether and to what extent the risks must be reduced, based on the defined acceptable risk ranges.
- If necessary, define and implement risk eliminating or risk reducing measures.

All steps must be performed by knowledgeable and trained people.

All relevant risks of a Site must be documented in a site risk inventory. The overall exposure of the Site and activities planned to reduce the risk must be regularly presented to local and divisional management and reported to CSE / CESA. CSE will consolidate this information and report to Group management.

Relevant risks of the Site should be communicated in an appropriate way to all employees potentially exposed, the neighbors and the public. Such communication has to be done in a way that the risks are not aggravated by it.

4.9 Emergency Management

Various organizational, personnel and technical measures may be necessary to manage threatening situations, incidents, breakdowns and accidents. All active units that are deployed, depending on the type and extent of an incident, are grouped under the **emergency response service**, whose size and equipment varies according to the Site and risk potential.

In the field of **emergency management** the following principles and procedures in particular should be observed:

- Provide and organize an emergency response service consisting of an internal emergency management staff and the appropriate internal and/or external operational elements for optimum response, according to local requirements.
 - Ensure availability (internal or external) of the necessary fire brigade and emergency medical service capacities.
 - Clearly define responsibilities and powers of the involved functions.
- Ensure an appropriate alarm organization in line with local needs and an appropriate around-the-clock emergency response.
- Guarantee that the emergency response service is well prepared through regular training and drills and through acquisition and maintenance of the necessary technical equipment.
- Prepare and update necessary documentation including organization charts, contact details of relevant persons, Site maps, intervention plans, documents on special hazard potentials, etc.
 - In particular prepare and plan for a quick, efficient and orderly disaster recovery through proper business continuity planning.
- Safeguard the flow of information to internal and external units – in particular between the Local Emergency Management (LEM) and the Corporate Issue Taskforce (CIT) in case of a major incident – as well as the communication with authorities and the public.
 - Pre-establish all potentially necessary contacts to supporting organizations, the police and the authorities.
- Train all employees with a view to potential incidents. Building evacuations in particular should be planned and practiced periodically.

4.10 Auditing and Inspection

4.10.1 Corporate SHE Auditing

Corporate SHE conducts SHE audits at the Roche Sites as follows:

- Define the audit methodology and SHE elements to be covered.
- Determine the audit frequency for the different types of Sites and for the individual Sites, based on risk potential, strategic importance, past and actual SHE performance, and other unique circumstances.
- Conduct the audits.
- Document all findings and recommendations in a formal report. Make this report known to the management.
- Require that the Site develop a corrective action plan.
- Verify and enforce implementation of the corrective measures.

4.10.2 Site SHE Inspections

The local SHE organization conducts regular SHE inspections following a comparable process as above.

Consider employing external experts on occasion to support the inspections.

4.10.3 Local Walk around Inspections

Management should organize their own regular local rounds of SHE inspections throughout all their areas of responsibility.

4.11 Due Diligence

Ensuring that potential SHE risks and liabilities are identified and considered as part of the decision-making process regarding acquisitions and similar transactions is an essential aspect of an effective SHE management system. In addition to serving to minimize liabilities associated with contaminated properties and reduce the potential for compliance problems associated with the operations of newly acquired businesses, an effective process in this area provides value to the negotiation process by identifying potential remediation and compliance issues which can then be incorporated into the negotiation. It is important that due diligence is performed for all property transactions, including acquisitions, joint ventures and leases, at the earliest possible stages of the transaction.

Supporting the due diligence process of third parties who plan to acquire parts of our business or properties is likewise important, ensuring a well defined base line for further negotiation.

Annex: SHE Principles and Procedures

The following list gives concrete provisions for the practical implementation of the Guidelines. More details are given in the SHE directives.

A.1 People

The following principles and procedures should be observed:

A.1.1 Health Hazards and Occupational Risk Management

- Conduct workplace health risk assessments.
 - Find and document workplace health hazards, exposures, and occupational risks.
 - Assess these risks (including those for passers-by).
 - Define and implement any necessary corrective and risk mitigating measures.
- Conduct occupational medical evaluations and exams.
 - Determine the general health status.
 - Determine fitness for duty.
 - Ensure early detection of adverse health effects from the workplace.
 - Provide medical advice.
 - Archive the data relating to industrial hygiene and occupational medicine for a minimum of fifty years.

A.1.2 Occupational Safety and Health Protection

- Follow this hierarchy for workplace risk management measures:
 1. Eliminate the risk by removal of the hazard.
 2. Reduce the risk by technical (engineering) measures.
 3. Reduce the risk by organizational (administrative) measures.
 4. Use personal protective equipment.
- In first priority reduce the potential impact
- In second priority reduce the probability
- Protect health and integrity of people from damage by chemicals, biological materials or physical effects (occupational safety).
 - Carefully assess material properties. Document the findings in safety data sheets and in operational procedures and take them into account in risk analyses.

- Define permissible exposure levels according to recognized exposure standards set by relevant authorities and internal Roche standards and categorizations, in particular for
 - chemicals, biological materials
 - radioactivity, ionizing radiation
 - electromagnetic radiation and fields
 - noise
 - heat, cold
 - vibration
 - exposure to forces (lifting restrictions)
 - light, infrared and ultraviolet light, lasers
- Monitor the exposure levels.
- Work with biological materials in compliance with Group Directive 17.
- Specifically consider the heightened susceptibility of pregnant women or women in childbearing years.
- Inform and instruct employees (including the supervisors and employees of outside companies working on Roche premises or under Roche supervision) on health risks and protective measures.
- Perform regular workplace inspections to ensure that the protective measures are strictly followed.
- Establish special approval procedures for tasks involving risks, such as welding, electrical work, work at elevated height, work in confined spaces, etc.
 - Include contractors in these procedures.
- Ensure good housekeeping.
- Maintain a formal program for preventive maintenance for all buildings, plants, installations and utilities and in particular for all SHE items.
- Ensure ergonomically appropriate workplaces.
 - Apply principles of ergonomic design when planning new workplaces.
 - Make available the necessary means, tools and utilities.
 - Install ergonomically designed furniture and computer workplaces.
 - Ensure proper illumination.
 - Avoid repetitive strain.

A.1.3 Mental Health

- Avoid unhealthy stress (distress).
- Protect against harassment and discrimination (cooperate with HR department).
- Protect against monotony.
- Provide assistance to and opportunities for aiding distressed employees.

A.1.4 Health Promotion

- Provide health promotion education and activities for physical and mental health.
- Inform about health topics for the private lives of employees.

A.1.5 Rehabilitation and Reintegration

- Facilitate return to work after illness or accident.
 - Offer alternative duties or initial restriction of work-time to ease the transition back to work.

A.1.6 SHE Knowledge

- Establish and define the necessary levels of SHE knowledge and competence for an individual job or task.
 - Determine the individual needs based on legal and job requirements.
 - Establish a training matrix to identify and record all SHE training requirements for a given job title or job task.
- Provide the necessary SHE education.
 - Provide basic SHE training to all Roche and contractors' employees.
 - Establish a SHE training process to assure
 - that necessary training courses are developed and offered,
 - that employees and contractors under your direct supervision are attending these required courses within established timeframes, and
 - that the training courses have the necessary effect.
 - The training process must include a system to document all training.
 - Use inhouse and / or external training opportunities.
- Ensure that employees have easy access to important SHE information and literature.
- Create and sustain a culture that heightens awareness and motivation for SHE (e.g. through regular written or verbal updates, presentations, etc.).
- Provide advice in SHE questions and inform about best practices.

- Evaluate opportunities for internal and support of external SHE research (e.g. collaboration with universities, support of governmental or non-governmental organizations).

A.1.7 Personnel Security

- Protect employees from criminal acts during work (threat calls, direct attacks, bomb mails, intimidations).
- Brief expats and employees travelling to risk countries on dos and don'ts.
- Give support to employees and their families intimidated or attacked at their private homes by political activists.

A.2 The Environment

The following principles and procedures in particular should be observed:

A.2.1 Safety of Chemicals

- Reduce risks by replacing highly hazardous chemical substances with less dangerous substances. Consider all types of hazards (e.g. reactivity, toxicity, mobility, persistence, potential for environmental damage, public acceptance, etc.) and the reliability of the assessment when comparing the substitute chemicals with the initial solution.
- Develop processes to ensure safe and correct labeling, transport, storage, handling and disposal of all chemicals, with special emphasis on dangerous goods.
- Support / comply with national and international risk reduction programs for substances which constitute a threat. Roche-specific programs for replacing such substances will be set up on a case-by-case basis.
- Monitor and properly manage chemicals, biological materials, special equipment and know-how which can be misused as starting materials or for the production of chemical or biological weapons, bio-terrorism, recreational drugs and narcotics or are subject to international supervision for other reasons, according to local legislation and the relevant in-house Group directives.

A.2.2 Emissions Control

- Take the necessary measures according to the following priority list:
 - Avoid pollutants.
 - Reduce quantities of pollutants.
 - Control the remaining pollutant emissions in order to meet all legal and in-house standards.
- Maintain a continuous improvement program for production processes (process development).
- Control unavoidable pollutants at the source whenever possible.

- Where applicable pre-treat the waste streams to avoid impairment of the functioning of end-of-pipe equipment and processes.
- Closely supervise the proper functioning of exhaust air and wastewater treatment facilities.
- Monitor emissions and the corresponding data in accordance with local legal regulations and internal Roche SHE provisions.

A.2.3 Clean Soil

- Maintain adequate systems, installations and procedures to avoid accidental or insidious contamination of the soil.
- Avoid landfilling with other than really harmless materials (e.g. building rubble).
- Identify soil and groundwater contamination caused by our operations or by former property owners operating on Sites now owned by Roche. In addition identify landfills where Roche or acquired companies have delivered harmful materials.
 - Assess the risk and liability caused by this contamination or in these landfills.
 - Where necessary remediate or secure the Site according to local regulations and Roche provisions.
 - Establish the permissible residual contamination.
 - Determine data on the physico-chemical and toxicological properties of the substances involved and data on the geological and hydro-geological environment.
 - Use remediation methods which exclude additional environmental risks as far as possible.
 - Closely supervise the remediation with state-of-the art analytical monitoring.
 - Protect employees, contractors, passers-by and surroundings from unacceptable emissions.
 - Ensure adequate information is provided to the public and authorities.
 - Aim at long-term sustainable solutions.
- Consider nature-oriented design of the Site, allowing for wildlife habitats.
- Minimize land use and soil sealing through appropriate master planning of the Site and building design.
- Consider seepage of uncontaminated water.

A.2.4 Clean Water

- Protect waterbodies and groundwater from undue contamination from
 - persistent and poorly degradable chemicals,
 - halogenated compounds (in particular solvents),

- heavy metals,
- insoluble contaminants,
- unacceptable non-deactivated biological materials, particularly if they are genetically modified
- active pharmaceutical ingredients and process intermediates
- Limit physical effects on waterbodies and groundwater (e.g. heat input, cooling, influence on the circulation).
- Where necessary wastewater must be treated in a suitable wastewater treatment plant (own plant or common plant with other companies or the public).
 - Ensure protection of waterbodies, groundwater and soil in the event of malfunctioning or outage of the wastewater treatment plant. Ensure detection is provided for these situations.
- Ensure integrity of plants and installations (and in particular wastewater systems) and thus avoid infiltration of contaminants into the soil.
 - Ensure early detection of non-integrity.
- Avoid excessive exploitation of water resources.
 - Reduce water consumption. Consider water collection and re-use.
 - Ensure a sustainable water supply.
 - Consider using rain water where applicable.

A.2.5 Clean Air

- Protect the air from undue contamination, in particular from
 - toxic substances
 - volatile organic carbon compounds (VOC)
 - ozone-depleting compounds
 - greenhouse gases, in particular halogenated hydrocarbons (CFC, HCFC, PFC, HFC etc.), carbon dioxide (CO₂)
 - nitrogen oxides (NO_x)
 - sulfur dioxide (SO₂)
 - dust, particulate matter
- Limit physical effects on air (e.g. heat input or extraction, clouding, noise, light (disturbance of wildlife), etc).
- Ensure integrity of installations, thus avoiding contamination.
 - Ensure early detection of leaks.
 - Develop and implement systems and processes to handle situations when leaks occur.

- Where necessary treat waste air in an exhaust air treatment system.
 - Ensure air emission control in case of malfunctioning or outage of such systems. Ensure immediate detection of such situations.

A.2.6 Environmental Risk Assessment

While developing a new product, the impact on and risk for the environment must be analyzed, evaluated and assessed carefully. This analysis forms an essential part of the new product application.

- Conduct the necessary studies and establish the necessary data in good time.
- Evaluate / estimate the predicted environmental concentrations and impact.
- Assess the resulting risk for the environment, animals and man.
- Update the risk assessment as available information or assumptions (e.g. sold quantities) change.

A.3 Resources

Roche products and our business processes and manufacturing practices should be designed to ensure that the best possible use is made of all resources used. Efficient use of resources also minimizes the amount of waste generated. Detailed maintenance of and attention to processes and process equipment will help to ensure that maximum efficiency is maintained.

Consumption of every resource at Roche must be well managed.

- Build awareness concerning consumption at work and at home.
- Motivate people to take steps to reduce their consumption (rewards / recognition).
- Educate, inform and consult individuals on methods and technology.
- Audit and check resource consumption to maintain focus on conservation.
- Report to management on efforts to conserve and results achieved.

The following principles and procedures in particular should be observed:

A.3.1 Energy

- Professionally manage energy production, distribution and consumption (energy management system).
 - Measure and monitor all energy flows.
 - Systematically look for energy conservation opportunities.
 - Reduce emissions from energy production, distribution and consumption by conceptual and engineering measures.

- Use low sulfur fuels with favorable carbon dioxide coefficients.
 - Optimize combustion technology (e.g. to reduce NO_x emissions).
- Encourage or require the use of co-generation and energy recovery technologies where appropriate.
- Optimally design new buildings, machines and processes to minimize energy consumption and to use sustainable types and sources of energy.
- Optimize existing buildings, machines and processes regarding energy consumption.
- Evaluate potential and feasibility (e.g. reasonable cost) of alternative energies.
- Ensure uninterrupted energy supply wherever this is of importance for the operation.

A.3.2 Chemicals, Dangerous Goods

- Optimize the consumption of chemicals and other dangerous goods.
 - Regularly search for possible synthesis and process improvements.
 - Evaluate new technologies.
- Attempt to substitute dangerous or environmentally hazardous substances by less problematic ones.
 - Consider the full life-cycle of these materials (including production, transport, use and disposal).
- Specifically control specially regulated materials:
 - narcotics and drugs that have the potential of illegal use,
 - precursors of materials which can be used for chemical weapons,
 - biological materials which can be misused for bio-warfare or bio-terrorism,
 - environmentally hazardous substances.
- Recycle materials where reasonably possible.

A.3.3 Water

Clean water is vital to our business but more importantly, will become one of the most important issues that we as human beings will face in the future. It is critical that we take measures now to carefully manage this precious resource.

- Optimize the quantity of water used in all types of processes. Use technologies and equipment designed to consume less water.
- Consider possibilities to capture, re-use and recycle used water.
- Consider drought tolerant landscaping.

A.3.4 Packaging Materials

- Minimize the quantity of packaging materials used for all types of products and operations, without compromising safety and quality.

- Choose those packaging materials with favorable properties (eco-balance, safety, potential for re-use and recycling).
- Re-use and recycle packaging materials where possible.

A.3.5 Data on Materials

- Ensure that all necessary data on safety, health and environmental protection are available for all materials used. Where relevant data is missing, generate it.
- Document these data.
- Make the relevant information available for those who handle the materials, in adequate form for the different audiences.
- Label materials / containers properly.

A.3.6 Eco-efficiency, Eco-balance

In line with the risk analysis concept, determine, document, assess and if necessary and possible, reduce the environmental impact of a Site.

- When selecting one of several possible alternatives for processes, installations and projects, evaluate and consider the eco-balance in the same manner, and with the same priority, as financial, technical or capacity considerations.
- Analyze ecological measures regarding the positive effect obtained in relation to the full life-cycle cost of the measure. Those measures with the best eco-efficiency should be implemented with priority.

A.3.7 Suppliers, Service providers, Outsourcing partners, Contractors

- When selecting suppliers, service providers, outsourcing partners or contractors, consider their SHE performance and sustainability practices in addition to their financial, technical or capacity capabilities.
- The depth of the evaluations and the decision criteria depend on the nature of the proposed level of business with these partners:
 - Inherent SHE risks and problems in the supplies or services delivered
 - Specificity for our type of business vs. general types of supplies or services
 - Volume of the contract
 - Exclusivity vs. commodity
- Regularly evaluate existing suppliers, service providers, outsourcing partners and contractors regarding their SHE performance through questionnaires, and where necessary by means of audits.
- Existing suppliers, service providers, outsourcing partners and contractors who do not meet our minimum SHE requirements, must be urged to improve their performance and standards. If they don't respond in an acceptable manner, the contract should be terminated. In critical cases, this should occur immediately.

- Contracts should contain corresponding provisions (SHE agreement).

A.4 Tangible and Intangible Assets

A.4.1 Buildings

- Consider all SHE aspects already in the conceptual and design planning stages of a project. Risk analysis is key to identifying all of the risks at these very early stages.
- Optimize new buildings regarding ecology.
 - Optimize the siting of a building to maximize / minimize heating and cooling needs.
 - Use appropriate materials, including recycled material where it makes sense.
 - Carefully select the energy sources and use best available energy technology.
 - Reduce heating, cooling and ventilation to what is really necessary and use best available HVAC technology with special emphasis on heat recovery.
- Design the buildings to provide for safe, healthy and ergonomically correct work areas.
 - Fire safety and life safety should be inherent in the design.
 - Build the necessary fire protection installations and escape routes.
 - Provide ample space for work areas and utility areas.
 - Ensure proper workplace lighting, view and ergonomic fit of equipment.
 - Keep noise levels in the workplace to comfortable levels and consider noise contribution when purchasing equipment.
 - Provide the necessary heating, cooling and ventilation – optimizing for health and environmental protection.
- Design security into the building and into the processes to be performed.
 - Ensure access control.
 - Protect assets against theft and espionage (physical assets and information).
 - Protect against intrusion (sabotage or similar attacks).
 - Install the necessary monitoring and communication systems.
 - Organize appropriate emergency response.
- When deciding on the location where to build the building, take SHE topics into consideration:
 - Access (e.g. public transportation)
 - Availability and easy transport of resources
 - Heating, cooling and ventilation needs

- Security situation, etc.

A.4.2 Plants and Installations, Infrastructure

- Design plants and installations for healthy and safe operation.
 - Design for inherently safe technologies (containment vs. relief, passive vs. active, etc.).
 - Perform risk analyses at multiple points in the design and planning process and implement the identified measures.
 - Build the necessary safety equipment (alarms, automatic shut-down, release installation etc.).
 - Design and build the plants and installations in a way that workers are protected from contact with production materials and physical effects by technical means and not primarily by personal protective equipment (PPE).
 - Construct plants and installations in a way that they can be operated and maintained in a simple and safe way, and not by primarily relying on worker behaviour.
- Provide clear and comprehensive standard operating procedures and instruction manuals.
- Maintain and repair plants and installations in a professional manner.
 - Ensure good housekeeping.
 - Organize and implement a preventive maintenance program.

A.4.3 Raw Materials, Excipients, Products, and Packaging Material

- Plan for, provide and ensure safe, secure and environmentally sensitive storage of these materials.
 - Ensure the necessary safety measures according to the inherent hazards associated with the materials (classification).
 - Separate non-compatible materials.
 - Construct warehouses for minimal heating and cooling.
 - Ensure containment of powders, liquids and gases in the event of an incident.
- Optimize transport of all materials – and especially those classified as dangerous goods – for safety and ecology.
 - Consider selecting the most ecological transport means and routes.
 - Avoid unnecessary transport.
 - Ensure full compliance with transport regulations.
 - Verify that only contract transport and warehousing service providers with an acceptable SHE level are utilized.

A.4.4 Residual Materials, Waste

- Initiate a process that generates waste only after determining an acceptable method of re-using, recycling or disposing of the waste.
- Treat waste and residual materials using the following prioritization methodology (from most preferred to least preferred):
 - Recycle to the original starting material, as far as technically, ecologically (in terms of energy expenditure and generation of further waste) and economically feasible.
 - Downcycle to a lower-value product (e.g. paper to cardboard).
 - Valorize, i.e. process to a saleable product.
 - Thermally valorize, i.e. incinerate with heat recovery (for waste with a high energy content, e.g. distillation residues, inseparable solvent mixtures etc.).
 - Incinerate without heat recovery, i.e. conversion to a mineralized end product.
 - Landfill (for restrictions see below).
- Collect all waste and residual materials.
 - Identify all wastes and residual materials
 - Separate the materials to assist in their further use or in optimizing waste disposal. Avoid mixing of waste.
 - Pre-treat waste which might form dangerous decomposition products in the disposal process or which might otherwise harm people engaged in handling and treating the waste.
 - Safely store and transport wastes according to their hazards.
 - Document type, quality and quantity of all wastes and residual materials and the pathway of their disposal. Ensure compliance with all local regulatory and Roche provisions regarding such documentation.
 - Ensure safekeeping of this documentation for an unlimited period.
- Re-use or recycle wastes and residual material whenever possible and sensible.
 - Consider selling these materials as raw materials or for energy recovery.
 - If not re-used or recycled internally, ensure that you select an outside partner who operates on an acceptable SHE level. Verify this by audit.
 - Ensure proper transport of the waste materials, in full compliance with the regulations in this field.
- Dispose of all other wastes and residual materials in a safe and ecologically friendly manner.
 - Do not landfill chemical waste or any hazardous materials.
 - Minimize landfilling of other waste (other than inert materials like building rubble or slag).

- Consider incineration of all combustible materials. Ensure that combustion plants used operate at a high technical and environmental standard.
- Carefully select disposal services which operate at an acceptable SHE level. Verify this by audit.
 - Ensure proper transport of the waste materials, in full compliance with the regulations in this field.
 - Ensure full documentation of the disposal of your materials and maintain this documentation in an accessible manner.
- Strictly follow the local regulatory requirements as they may differ considerably from country to country.

A.4.5 Knowledge, Know-how

Take all necessary measures to protect intellectual property and critical knowledge and know-how. For more details see the Roche *Guidelines on Document Management*, the Roche *Directive on the Use of Roche Electronic Communication Tools* and the Roche *E-Mail Directive* (to be found at <http://groupnet.roche.com/cll/cll-directives/cll-coclegal.htm>).

A.5 Processes

Carefully document all technical, business and other processes which have relevant SHE elements.

- Define the prerequisites for starting the process.
- When changing a process, ensure, by a thorough analysis that the prerequisites are still met.
- Periodically verify that the prerequisites are still met.
- Continuously improve the SHE performance in all processes.

Approved by CS and CSE on 1st September, 2007