

# HSE KEY REQUIRE- MENTS

ACT SAFE &  
SUSTAINABLE!





# Health, Safety and Environment (HSE) Commitment of Bayer

Bayer is a Life Science company with a more than 150-year history and core competencies in the areas of health and nutrition. With our innovative products, we are contributing to finding solutions to some of the major challenges of our time. We care for our customers, patients and society and conduct our business in accordance with principles of sustainable development and our commitment to Responsible Care®.

## OUR HSE PRINCIPLES

We respect and care for the environment and the safety, health and wellbeing of people, whether they are employees, contractors, visitors or neighbors around the world. We continuously improve our business processes while meeting or exceeding legal and regulatory HSE requirements. We provide an environment for open and transparent communication of HSE matters and concerns. We recognize that the skills and involvement of our employees are essential for fulfilling the HSE principles and commitment of our company.

## OUR COMMITMENT

Driven by our HSE principles, we commit to:

- // Integrate HSE into business strategies and processes.
- // Systematically identify, assess and manage HSE risks along the value chain and throughout the product life cycle.
- // Provide the necessary resources to live up to our HSE principles.
- // Manage HSE by establishing and maintaining an effective HSE management system.
- // Measure HSE performance and develop annual and long term HSE objectives to achieve continuous and sustainable improvement.
- // Verify compliance with internal and external HSE requirements through audits.
- // Manage HSE matters and their impact on practices, processes and products to meet stakeholder expectations.
- // Promote HSE awareness and enhance confidence in our business.
- // Make every employee aware of their responsibility for HSE and demand commitment.



**Werner Baumann**, Bayer AG  
Chairman of the Board of Management

Leverkusen, March 2018

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1

# Leadership

Management must show a clear commitment to achieving high HSE standards by visibly demonstrating their accountability for working safely and responsibly.



# 1 / Leadership

## 1.1 HSE LEADERSHIP

Management must show a clear commitment to achieving high HSE standards by visibly demonstrating their accountability for working safely and responsibly.

This requires:

- // Being a role model for safe behavior
- // Regular communication of HSE as a priority
- // Positive reinforcement of safe and responsible behavior

Content, completion, and effectiveness of training must be documented.

## 1.4 HSE COMPLIANCE

HSE compliance rules are an integral part of the Corporate Compliance Policy of Bayer and are mandatory for all employees.

HSE is highly regulated in many cases. All legal and other requirements must be followed.

## 1.2 POLICY AND HSE ORGANIZATION

Bayer publishes an HSE commitment, communicates it to all employees, and provides public access. This HSE commitment needs to be locally implemented and communicated. Based on these commitments, local management in countries, sites, and functions must:

# 01

// Assign and document HSE accountabilities and responsibilities.

# 02

// Establish and implement an HSE management system.

## 1.3 EMPLOYEE HSE AWARENESS, QUALIFICATION, AND CONTRIBUTION

All employees must be made aware of their personal responsibility and contribution to HSE.

HSE responsibilities and accountabilities for employees must be defined in workplace procedures, individual job descriptions, or appointment letters. These must be communicated to the employees.

All employees must be encouraged to actively participate in continually improving HSE.

Contribution to HSE must be taken into account during employees' work performance appraisals.

The required HSE competences must be ensured by training. The effectiveness of trainings must be assessed.

Third parties providing services for Bayer or on Bayer premises must have appropriate HSE programs in place.

Sites/countries must develop and maintain training plans for all employees and directly supervised contractors. They must define specific training needs to ensure HSE competence according to their responsibilities.

Sites and country organizations must identify, evaluate, and monitor applicable HSE regulations. If binding external rules and regulations go beyond or contradict Bayer HSE regulations, these rules and regulations take precedence.

Sites and country organizations must ensure that all legally required HSE positions are identified and filled with a competent incumbent. The individual assignment must be signed and documented, and, if necessary, the authorities must be notified. A list of all legally required HSE positions must be kept up-to-date and be available.

Procedures and responsibilities for HSE compliance must be clearly defined and communicated to appropriate personnel. Organizations must ensure that all employees understand the HSE requirements, as well as their HSE responsibilities.

Compliance with HSE regulations and permit requirements must be regularly checked, documented, and archived.





03

04

05

// Set HSE objectives.

// Define and implement HSE programs.

// Provide sufficient resources for HSE.



# 2

## *HSE management system*

The HSE management system is the framework of policies, processes, and procedures to fulfill all the tasks required to achieve the HSE objectives. A formalized management system helps to ensure that employees are clear about who does what and how to cover statutory or regulatory requirements. This facilitates compliance with external and internal requirements, fosters continual improvement, and helps to achieve the organization's objectives.





100  
AVERAGE  
GOOD  
VERY GOOD  
EXCELLENT

# 2 / *HSE management system*

The global HSE management system is an integral part of the Bayer Integrated Management System (IMS) and provides HSE governance, HSE programs, and annual HSE objectives.

Based on this global management system, each site/country must establish and implement a process-oriented HSE management system (following acknowledged international standards for management systems), describing important HSE processes and their interaction. It must be based on the systematic identification of risks and requirements and adequately address them.

Responsibility for the implementation of HSE key requirements and regulations, as well as for the implementation and maintenance of the HSE management system, must be assigned on a site/country level.

Employees must be encouraged to participate actively in the development, implementation, and improvement of the HSE management system.

As part of the management system, an adequate document management system must be introduced and maintained. This includes a process for document control as well as assignment of responsibilities regarding preparation, modification, approval, revision, distribution, retrieval, and archiving of documents and records.

Documents and records must be classified following information classification rules and protected accordingly.

## 2.1 MANAGEMENT OF HSE RISKS

A hazard identification and HSE risk assessment must be conducted for all existing routine and nonroutine work, use of new substances, new work processes, capital projects, divestments, and significant changes in personnel.

These assessments must address the potential impact on humans, the environment, legal compliance, assets, and reputation.

Managers must involve employees in the identification and assessment of HSE risks.

Depending on the identified risks, the assessment must be adequately documented and updated at least every five years.

Measures must be defined and implemented to mitigate HSE risks to a level as low as reasonably practicable, to avoid unjustifiable risks for people and the environment. In the selection of measures, technical solutions take precedence over organizational measures and personal protection measures.

Employees must be adequately informed about relevant HSE risks and the corresponding mitigation measures.



## 2.2 PRODUCT AND PROCESS DESIGN

HSE aspects must be addressed during product and process design.

During the development of products and their manufacturing processes, the replacement of hazardous substances by less hazardous ones, the conservation of energy and resources, as well as the principles of inherently safer design must be incorporated to the greatest practicable extent.

## 2.3 OPERATING PROCEDURES

Operating procedures are required to describe the correct execution of a task. They must be available in written form if organizational measures are required to mitigate HSE risks.

All documented operating procedures must:

- // Take HSE risk assessments into account and provide relevant safety information
- // Be available for all routine and foreseeable nonroutine tasks during all phases from startup to shutdown, including emergency shutdown procedures
- // Be reviewed and updated on a regular basis and after changes

Before performing tasks, employees must be trained in the safe execution according to the operating procedure. Retraining is required on a regular basis and after relevant changes.

## 2.4 MAINTENANCE AND INSPECTION

Reliability of equipment and facilities are a prerequisite for ensuring the health and safety of our employees, as well as the protection of the environment.

A program for maintenance and regular inspection of facilities and technical equipment using appropriate methods and documentation must be in place.

Robust procedures must be in place to ensure that technical equipment under maintenance or inspection cannot cause harm (e.g. lock out/tag out procedures, physical barriers, electrical isolation, line-breaking).

Safe operation of equipment must be checked and documented prior to use; in case of replacement, repair, or maintenance; and during regular inspections. See also chapter 2.7 "Management of change".



# 2/HSE management system

## 2.5 MANAGEMENT OF INCIDENTS, SIGNIFICANT NEAR MISSES, AND NONCONFORMANCE

01

All sites and country organizations must have a written procedure to ensure the adequate management of incidents, significant near misses, and nonconformance, covering the following aspects:

// Protection of people and the environment must be the first priority in the management of incidents.

02

// Incidents, significant near misses, and nonconformance must be notified in a timely manner, consistent with their severity, to the respective management.

03

// To avoid recurrence and to mitigate consequences, these incidents must be investigated with identification of root causes. Corrective and preventive actions must be implemented. Their effectiveness must be monitored.

04

// Relevant lessons learned from root-cause investigations must be communicated throughout Bayer as appropriate.

## 2.6 CONTINUAL IMPROVEMENT

HSE performance indicators and objectives are defined on a Bayer global, corporate function, and divisional level.

Sites and country organizations must set HSE objectives that positively contribute to these performance indicators and objectives. They must demonstrate continual performance improvement.

All HSE performance indicators and objectives must be routinely reviewed and updated.

Plans must be developed and implemented to monitor progress against performance indicator objectives, the results evaluated at least once per year, and corrective actions taken where necessary.

Corrective and preventive actions must be carried out with documented responsibilities and timelines.

Employees must be encouraged to point out deficiencies and to suggest improvements.

Employee suggestions for eliminating defects and improving or optimizing HSE processes must be recorded, addressed, and the outcome communicated in a timely manner.

## 2.7 MANAGEMENT OF CHANGE

A management of change system must be implemented covering HSE-relevant changes.

This refers to permanent and temporary changes e.g. in

- // Technology (processes, technical equipment, process parameters)
- // Materials (specification, packaging, supplier)
- // Buildings and other structures
- // Procedures
- // Organization
- // Logistics
- // Product transfers
- // Investment projects
- // Divestment projects

These changes must be adequately managed, documented, and archived. They must be adequately communicated to relevant stakeholders.

## 2.8 HSE PERFORMANCE REPORTING AND COMMUNICATION

HSE performance data from sites must be reported into a global HSE reporting system at regular intervals. The required data set is defined on a global basis.

This data is the basis for management reviews, employee information, and external nonfinancial performance reporting.

Employees of sites and country organizations must be regularly informed of relevant HSE performance and analyses as appropriate.

External questions relating to HSE issues must be addressed by a designated and competent spokesperson.

## 2.9 AUDITS AND SELF-ASSESSMENT

HSE audits are an important tool to identify and mitigate HSE risks. They foster continual improvement of HSE performance.

Each site and country organization is subject to HSE audits following a risk-based approach.

The audited units are responsible for implementing corrective actions and for regularly reporting on the implementation status.

Sites and country organizations must carry out internal HSE audits or self-assessments at appropriate and defined intervals.

These audits must be planned, conducted, documented, and followed up on adequately.

## 2.10 HSE MANAGEMENT REVIEW

Sites and country management must conduct an HSE management review to evaluate the adequacy, strengths, weaknesses, and effectiveness of the HSE management system at least once a year.

It must take the following points into account:

- // HSE commitment, objectives, and programs
- // HSE performance
- // Requests and complaints by authorities, the public, and employees
- // HSE compliance
- // Results and action plans of audits/self-assessments
- // HSE reviews and risk assessments
- // Previous management reviews
- // Adequacy of resources
- // Opportunities for continual improvement

Improvement needs must be identified and adequately addressed. Results of the management review must be documented.



# 3

## *Incident and emergency preparedness*

Professional management of incidents and emergencies is crucial to minimize the impact on people and the environment.





Professional management of incidents and emergencies is crucial to minimize the impact on people and the environment. It also protects business continuity and the reputation of Bayer.

Sites and country organizations must develop preparedness plans that adequately address the management of emergencies and other incidents, such as:

- // Fatalities
- // Injuries and health conditions requiring immediate medical attention (including pandemics)
- // Fire or explosion
- // Release of hazardous material (including chemical, biological, radioactive)
- // Severe property damage
- // Environmental incidents
- // Severe technical failure (e.g. power outage)
- // Natural disasters

The emergency preparedness plans must include:

- // Assessment of required internal and external resources and assets, including their availability and response time for emergency response.
- // Procedures for emergency response (ensuring 24/7 coverage)
- // Procedures for managing accidental release of hazardous chemicals and hazardous biological material
- // An up-to-date inventory of hazardous substances and risk areas
- // Responsibilities assigned to specific individuals or positions
- // List of personnel resources with adequate expertise and training
- // Protection of responders, employees, visitors, the public, and the environment
- // Evacuation and shelter-in-place for employees and/or neighbors
- // Procedures for internal and external communication and notification, covering:
  - Staffing requirements (ensuring 24/7 coverage)
  - Notification to relevant authorities and communities
  - Notification of senior management
  - Adequate and timely response to media attention
- // Adequate maintenance and testing procedures for emergency-relevant technical equipment

All employees, contractors, and visitors must be appropriately instructed in the actions to be taken in the event of an emergency.

Sites must have an understanding of external emergency responders' availability, capacity, capability, and response time in case of an alarm. Requested safety information must be shared with emergency responders in a timely manner.

The emergency preparedness plans must be reviewed and updated regularly, at least every three years or whenever there is a significant change in risk or personnel.

Employees and other relevant stakeholders must be informed about the parts of the emergency preparedness plan relevant to them. Sites must conduct emergency response drills (e.g. firefighting/evacuation drills) to assess and improve the response effectiveness. If external responders are essential for emergency preparedness, joint emergency drills should be conducted. The frequency of drills must be defined and based on a risk assessment.

In addition, and depending on the identified risks, crisis management drills should be conducted regularly (e.g. natural disasters, pandemic preparedness).

For additional requirements to ensure fire safety, see chapter 5.5 "Fire safety".



# 4

## *Health management*

- // Occupational medicine
- // Occupational health and hygiene
- // Health promotion



Occupational medicine and occupational health and hygiene are mandatory to protect the health of employees. Compliance with applicable rules and regulations must be ensured as described in chapter 1.4 “HSE compliance”. Additional requirements from chapter 2 “HSE management system” must be considered.

In an effort to maintain and improve the health and well-being of the work force, Bayer offers health promotion programs in which employees may participate voluntarily.

#### 4.1 OCCUPATIONAL MEDICINE

A medical surveillance program must be provided at all sites. It must be supervised by a trained professional in occupational medicine. The program must be based on workplace risk assessments. It defines frequency, triggering events (e.g. new hire, return to work, termination), and content of examinations.

Physical and health requirements for workplaces must be specified and considered during the employee selection and placement process.

Based on the examinations, the medical practitioner provides results and medical advice to the individual only. The employer receives general “fit for duty” statements in accordance with data privacy requirements.

The medical practitioner advises the employer and the employees regarding workplace-related medical issues.

A secured medical record system must be implemented in accordance with data privacy requirements.

#### 4.2 OCCUPATIONAL HEALTH AND HYGIENE

Work-related hazards, including e.g. physical, chemical, biological, radiological, and ergonomic aspects, must be identified, and related health risks must be assessed.

Appropriate risk mitigation measures must be defined and implemented (see chapter 2.1 “Management of HSE risk”). Adequate hygiene standards must be ensured at all workplaces.

These measures and standards include:

- // Hygiene monitoring based on regulatory or internal occupational exposure limits (e.g. for chemical exposure, noise, vibration, radiation, heat, cold)

- // Medical surveillance program (see chapter 4.1 “Occupational medicine”)
- // Appropriate amenity facilities
- // Hygiene practices
- // Appropriate work clothing and its laundering
- // Designated eating, drinking, and smoking areas

Employees must be instructed and trained on the health and hygiene measures and standards.

Hygiene monitoring records must be securely stored for at least 30 years.

#### 4.3 HEALTH PROMOTION

Sites and country organizations must provide programs for the promotion of general good health and well-being of employees. The content of health promotion programs must consider local needs for health maintenance, improvement focus areas, and existing provisions. The programs must be made available to all employees, who can participate voluntarily.



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# Safety

Bayer is committed to ensuring the safety of employees and contractors, as well as safe operations at its own facilities.



## 5.1 GENERAL ASPECTS

Safety management requires compliance with laws and regulations, compliance with Bayer internal requirements (e.g. directives and procedures), and the active commitment and involvement of all employees.

### 5.1.1 Housekeeping

Workplaces and equipment must be kept clean, orderly, and free of clutter in order to prevent injury, illness, damage to assets, and contamination of the environment.

### 5.1.2 Effectiveness of safety measures

Adequate measures to ensure safety in the workplace must be taken as described in chapter 2.1 “Management of HSE risks”. These must be regularly maintained or renewed. Their availability for use and effectiveness must be tested regularly or before use. Adequate documentation must be maintained where required. This applies to all safety measures including e.g.:

- // Emergency exits
- // First-aid kits
- // Local exhaust ventilation
- // Personal protective equipment
- // Safety showers and eye wash stations
- // Seat belts
- // Tire pressure

### 5.1.3 Permit for hazardous work

A procedure must be in place for work requiring a “permit for hazardous work” and the level of approval.

A work permit for hazardous work must be issued in all cases of:

- // Work with potential exposure to hazardous substances, electricity, moving equipment, radiation, heat, and cold
- // “Hot work” (welding, grinding, etc.)
- // Work at height
- // Work in confined space
- // Work on safety-related equipment
- // Heavy or difficult lifting work

These permits to work must define the required safety measures in writing.

## 5.2 OCCUPATIONAL SAFETY

Occupational safety deals with the protection of all employees during work. This requires proper HSE risk management in accordance with chapter 2 “HSE management system”.

Depending on the job-groups and tasks, additional specific requirements apply.

### 5.2.1 Driver safety

Management must ensure that employees driving vehicles for business purpose are able to follow all safety rules. This includes provision of adequate equipment and appropriate workload planning.

Rules for maximum driving/working hours and rest periods must be established and followed to prevent driver fatigue.

Professional maintenance of company vehicles must be ensured both regularly and on demand. Before any vehicle is used, it must be checked by the driver and used only if in safe condition.

Vehicles must not be overloaded with people, goods, or equipment.

All drivers and passengers of four-wheel vehicles and trucks must use seat belts.

While riding two-wheelers, motorcyclists must wear safety helmets approved for this purpose.

The handheld use of phones is not allowed while driving, even if it is not forbidden by law.

Driving under the influence of alcohol or drugs is not allowed.

Employees must be made aware that specific medical conditions may also prohibit driving.

All drivers must maintain a current, valid driver’s license, appropriate for the class of the vehicle driven.

Programs for driver safety and defensive driving must be in place for all employees regularly driving for business purposes.

### 5.2.2 Machine safety

Purchased machines and package units have to fulfill internationally accepted and state-of-the-art technical regulations, including an adequate safety concept with regard to machinery-related hazards. It has to be checked if additional hazards may occur due to their integration into the existing unit.

# 5 / Safety

Compliance with applicable laws, regulations, and internal requirements has to be verified before start-up. Periodic inspections must ensure that machines and package units are free of defects at all times.

Safety devices may not be bypassed, rendered inoperable, removed, or modified without a formal management of change review.

## 5.2.3 Handling of hazardous materials

Employees handling hazardous materials must be informed before use of the physical, chemical, biological, and toxicological properties of the materials handled.

Operating procedures and safety instructions must be provided.

New or unknown substances must be considered hazardous until sufficient knowledge is obtained.

## 5.2.4 Radiation safety

A radiation safety officer (responsible person) must be appointed for each site working with radioactive materials or ionizing radiation equipment. This person may require additional approval by a licensing agency. The radiation safety officer advises management on and ensures compliance with applicable radiation safety regulations.

A register of all radioactive sources must be kept detailing type, identification number, location, acquired from whom, and final disposal mechanism. All radioactive sources must be labeled for identification purposes.

## 5.3 PROCESS AND PLANT SAFETY

Process and plant safety deals with the safe operation of technical processes and equipment. This requires proper HSE risk management in accordance with chapter 2 “HSE management system”.

All processes, plants, and equipment must be designed so that safety risks are reduced to a level as low as reasonably practical, to avoid unjustifiable risks to people and the environment.

Necessary safety information to assess and define safe operating conditions and safe use of equipment must be available on site.

An adequate systematic safety review encompassing hazard identification, risk assessment, and definition of appropriate safety measures must be conducted and documented before start-up and regularly reviewed for all technical processes and equipment.

For all safety measures, a robust maintenance and inspection regime must be established to ensure that the safety devices fulfill their required safety function and meet the reliability requirements at all times. See also chapter 2.4 “Maintenance and inspection”.

The safety documentation must be kept up to date, taking changes, new process knowledge, or changes in technical standards or regulations into consideration. See also chapter 2.7 “Management of change”.

The safety review team must consist of all necessary disciplines and competencies regarding technical and chemical aspects, as well as process knowledge and operational experience.

Safety-relevant measures must be protected against unauthorized access or change.

## 5.4 BIOSAFETY

Biological material must be handled with appropriate care to protect all employees, the community, and the environment. It comprises microorganisms, invertebrates, vertebrates, plants, cell cultures, toxins, and allergens derived from biological material.

A suitably trained and qualified biosafety representative must be appointed for each site working with biological material.

A biosafety risk assessment must be conducted and verified by the biosafety representative and a biosafety expert. Defined measures must be implemented.

## 5.5 FIRE SAFETY

An assessment of the risks relating to fire must be carried out for all buildings that considers the probability of a fire occurring and the potential consequences.

Appropriate measures must be defined and implemented based on the assessment and legal requirements. These include structural fire protection, fire prevention and firefighting systems, written procedures, and training of personnel.

The availability and competence of internal and external emergency responders must be taken into account.

If required by the risk assessment, a contaminated fire water retention concept must be developed.

For additional requirements regarding emergency preparedness, see chapter 3 “Incident and emergency preparedness”.

## 5.6 MATERIAL SAFETY

Adequate and up-to-date HSE data must be available for all materials handled to ensure that related HSE hazards are addressed, evaluated and the risk for employees and the environment can be mitigated.

Applicable rules and regulations (e.g. chemical legislation, transportation standards) for all materials must be obeyed.

Safety data sheets (in accordance with GHS standard) must be provided for all raw materials, products, maintenance chemicals, utility chemicals, and fuels.

Tanks and storage containers must be labeled:

- // To comply with applicable rules and regulations
- // To identify the material stored
- // To provide the necessary HSE information to protect people and the environment

Appropriate procedures must be implemented based on a risk assessment to ensure that incoming materials match the order. Identity checks must be performed before goods are received into the plant.

## 5.7 PACKAGING, TRANSPORT, AND WAREHOUSE SAFETY

Packaging material must be selected for each individual material to ensure proper protection of people and the environment during all phases of use.

Aspects of usability, resource conservation, recycling, and product protection, as well as product stewardship requirements, must be addressed in the selection of packaging material.

UN-certified packaging must be used for regulated dangerous goods.

All materials must be transported and stored in accordance with all applicable rules and regulations. This must be checked and documented. Procedures must be in place to ensure the suitability of vehicles and carriers used for the transportation of goods (e.g. roadworthiness, co-transportation of different goods, cooling/heating requirements, load securing).

Drivers must have the required licenses and be trained for proper handling and stowage of the goods being transported and for actions required in an emergency, e.g. fire or leak. Required transportation documents must be available and checked.

Powered industrial trucks (e.g. forklift trucks) must be properly maintained, kept in a safe condition, and operated only by trained and authorized drivers. They must be protected against unauthorized use. Additional requirements apply as described in chapter 5.2.1 “Driver safety”.

The selection of a warehouse location must take logistical, safety, environmental, and economic aspects into account.

Warehouse design and operation must be based on the properties of the material stored, e.g. flammability, decomposition behavior as well as human and eco-toxicity. They must prevent the release, fire, decomposition, or explosion of stored substances in order to protect people and the environment.

Additional requirements regarding emergency preparedness and fire safety apply also for warehouses as described in chapters 3 “Incident and emergency preparedness” and 5.5 “Fire safety”.

Failures of packaging material, material releases, and other incidents or nonconformance during transportation and storage of material must be handled as described in chapter 2.5 “Management of incidents, significant near misses, and nonconformance.”



6

# *Environmental management*

Bayer is committed to protecting the environment and to continually improving our ecological performance.







In accordance with chapter 2 “HSE management system”, each site must identify, evaluate, and monitor all relevant environmental aspects. The site must develop and implement a plan to mitigate identified environmental risks to an acceptable level. Compliance with applicable rules, regulations, and permits must be ensured as described in chapter 1.4 “HSE compliance”.

Recognized historical pollution at sites and at third-party locations for which Bayer is legally liable must be managed adequately and in compliance with all applicable laws and regulations.

Sites must have a spill prevention, control, and counter-measure plan appropriate for the hazard and quantity of materials handled on site.

Environmental objectives and programs must be developed and implemented in order to reduce the environmental impact. Progress must be monitored, reported, and documented.

General principles for environmental management must be adhered to, following these priorities:

- 01 Avoid generation of waste/emissions.
- 02 Recycle where reasonably practical.
- 03 Minimize waste/emissions that cannot be avoided or recycled.

Unavoidable waste/emissions must be treated or disposed of in a safe and environmentally responsible manner.

Environmental aspects must be updated whenever a new installation or a major modification is made to an existing installation. See also chapter 2.7 “Management of change”.

The site must keep records of:

- // All industrial activities, including their location and time period
- // Environmental incidents
- // Waste disposal
- // Environmental emissions
- // Soil and groundwater monitoring data
- // Permits

Bayer standards and industry good practice must be used in design, installation, and operation of Bayer-owned pollution control equipment and treatment plants.

Third parties involved in environmental services (e.g. effluent and waste treatment, waste disposal) must be selected considering criteria of environmentally sound and compliant operation.

Contracts must stipulate legal compliance by the service provider, define the environmental performance standards, and assign liability to the third party.

## 6.1 MANAGEMENT OF WATER AND AIR EMISSIONS

Pollution control standards must be established. When there are no statutory limits and risk assessment indicates the need, internal pollution control limits must be set, taking industry practice into account.

Effectiveness of the pollution control units must be monitored.

Suitable retention capacity must be provided for abnormal effluents (e.g. exceeding discharge limits), spills, and potentially contaminated storm water and fire-fighting water.

Retained effluents, spills, and potentially contaminated water must be analyzed and disposed of under controlled and compliant conditions.

All wastewater and waste-gas streams at a site must be documented regarding their composition, quantity, and disposal route in a site wastewater/waste-gas inventory.

Detailed technical documentation of all piping, sewers, drainage systems, containments, sample points, and treatment facilities is required.

# 6 / *Environmental management*

## 6.2 SOIL AND GROUNDWATER

Measures must be taken to prevent soil and groundwater contamination. These will include:

- // Effective secondary containment of storage tanks
- // Proper design, maintenance and inspection programs, and appropriate leak detection for tanks, containers, and pipes with hazardous materials
- // Impermeable surfaces with adequate retention volume at road/rail tanker loading and unloading areas, container storage areas, and warehouses

The installation of new underground storage tanks and piping systems for hazardous materials should be avoided. If this is not possible, they must be double-walled and have automatic leak detection.

Maintenance and construction activities in areas with contaminated soil require a risk assessment and appropriate

control measures. Excavated material must be analyzed and disposed of under controlled and compliant conditions.

Strategies must be developed and implemented to ensure the protection of people and the environment at contaminated sites that are no longer operational. A closure plan must be drawn up describing retention, remediation, demolition, disposal, or storage of important documents and records, including a named responsible person.

Bayer-owned landfills must be regularly monitored to prevent soil and groundwater contamination. The creation of new Bayer-owned landfills is not permitted.

## 6.3 WASTE MANAGEMENT

Each site has to keep an up-to-date inventory of all waste.

For each waste stream, this must include the name and description of the waste, its source, its quantity, adequate information about its composition, hazard classification, and final treatment and disposal.

## 6.4 NOISE/LIGHT EMISSIONS

Procedures must be introduced and maintained to ensure that on-site noise hazards, as well as noise and light emissions, are appropriately addressed during site operation, investment projects, and selection of new equipment to reduce them to as low as reasonable practicable to avoid unjustifiable risks for people and the environment.





7

# *HSE management for suppliers and service providers*

Bayer regards adherence to sustainability standards within its supply chain as an obligation and an important lever for minimizing risks.



Bayer regards adherence to sustainability standards within its supply chain as an obligation and an important lever for minimizing risks. These requirements are established in Bayer's Supplier Code of Conduct.

Additional HSE-relevant requirements for external partners must be outlined in more detail, documented, and agreed upon in contracts.

Procedures must be available for setting up and amending contracts with suppliers and service partners, ensuring that HSE-relevant requirements are adequately defined, documented, and agreed. This particularly refers to the provision and sharing of HSE-relevant data and information.

Bayer must be able to evaluate the HSE commitment and performance of suppliers and external service providers, by

- // assessment/audit of their HSE management system, operations, and HSE performance or
- // document based review of HSE performance data executed by Bayer or entrusted third parties.

The results of the above evaluations must be taken into account for supplier evaluation.

Contractors and service providers on Bayer premises must be informed about specific HSE risks and implemented HSE processes. Adequate supervision of contractors on Bayer premises must be ensured.



# 8 / *Imprint*

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