Introduction

This guideline is designed to be used by EBRD Financial Intermediaries (FIs) to understand the nature of environmental and social (E&S) risks associated with this sector and suggested actions for businesses to manage these E&S risks. It also provides guidance for FIs on potential due diligence questions to raise with management to understand how their business is managing these E&S risks. This guideline focuses on material E&S risks; it is not an exhaustive list of E&S risks. In managing E&S risks, all businesses should be compliant with relevant E&S laws and regulations. Where applicable, these include European Union legislation, which may also be taken as a benchmark for good practice.

This guideline relates to companies involved in processes designed to modify the surface properties of metallic products for decorative and/or functional purposes. Some of the processes are also used for coating non-metallic products where the risks may be similar.

Reference NACE codes:
- 25.61 Treatment and coating of metals

Material risks

Below is an overview of the material risks present in the metal coatings industry.

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<th>E&amp;S Risk Category</th>
<th>Environment</th>
<th>Health and safety</th>
<th>Labour</th>
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<th>Key E&amp;S Risks (In order of materiality)</th>
<th>Affect the natural environment</th>
<th>Affect the health or safety of employees</th>
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<td>Water management and wastewater</td>
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<td>Occupational Health and Safety</td>
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1 This guideline outlines some relevant legislation but does not provide an exhaustive list of applicable laws and regulations.
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1. Process description

Once a metal product or component has been created (see Fabrication of Metal Products guideline), there is a wide variety of surface engineering processes used in coating.

Firstly the metal product may need pre-treatment in order to clean it, such as removing metal oxides or undesirable coatings. This can be done by:

- **Mechanical cleaning** e.g. brushing or blasting (a suitable medium is ‘blasted’ with or without water towards the surface to remove the contamination).
- **Organic solvent cleaning.** Solvents are effective in dissolving and removing oils and grease or other soluble contaminants. Solvent cleaners can be applied by immersion, spray, vapour or ultrasonic methods.
- **Aqueous cleaning.** This may use pure water or acidic, alkaline or neutral aqueous solutions.
- **Biological cleaning.** This involves enzyme cleaners, surfactant solutions containing bacteria that break down the contaminant, or degreasing agents derived from plant material.

Deposition of coatings on the metal product can be carried out by:

- **Electroplating:** deposition of a thin layer of metal by passing an electric current through an aqueous solution of metal salt.
- **Anodising:** electrolytic treatment, mainly of aluminium and magnesium, which results in the oxidation of the metal surface to form a protective film of metal oxide.
- **Electroless deposition:** chemical reduction of certain metals, (copper, nickel, gold and tin).
- **Chemical conversion:** includes chromating or phosphating (coating with chromate or phosphate), metal colouring, and passivating (reducing reactivity with environmental factors). These operations may be chemical or electrochemical.
- **Organic coating:** painting, spraying or dipping with solvent, water-based or powdered organic substances.
- **Heat treatment:** use of heat in salt baths to alter the metallurgical structure and mechanical properties of a component (e.g. softening, hardening or stress relieving).
- **Hot dipping:** dipping ferrous articles into molten zinc or zinc alloy (galvanising) or tin or tin alloy (tinning).
- **Metal spraying:** use of heat to transfer melted metals to surfaces of prepared components. Plasma and arc heating are common melting methods.
- **Vitreous enamelling** (also known as porcelain enamelling): application of glass containing liquids by dipping or spraying techniques on to metals, glass or ceramics.

Many installations operate a mixture of small and large production lines, and a mixture of electrolytic and chemical processes. The majority of processes require pre-treatment, at least one core activity, rinsing, and drying.
## 2. Key E&S Risks

Metal coating businesses may need permits, licences or authorisation to prevent their activities from causing pollution or harming human health. An environmental permit from a national or local authority may be required where an installation is a large consumer of organic solvents and significant volatile organic compound (VOC) emissions may be released. Water use and discharge and trade effluent permits may also be required, particularly for those facilities where there is potential for effluent to be contaminated with heavy metals. Metal coating is often part of a wider manufacturing process where these and other permits might also apply.

Specific legislation that may apply to the metal coatings sector may include, but is not limited to, the following:

- **The Solvents Emissions Directive** (1999/13/EC) sets out emission limit values for VOCs in waste gases and maximum levels for fugitive emissions from obligated facilities.
- **Seveso III Directive** (2012/18/EU) which aims to control the major accident hazard from dangerous substances. The Seveso Directive obliges Member States to ensure that operators that store and use substantial quantities of dangerous substances have controls in place to prevent major accidents. Operations outside the EU will be subject to local regulations.
- **Registration, Evaluation and Authorisation of Chemicals (REACH)** (1907/2006). If certain chemicals are being used within the EU they may need to be registered under the REACH regulation.

Below are the material E&S risks associated with this sector and key measures to manage them. Where gaps are found in the management of key E&S risks, the E&S risk management measures should form part of a corrective E&S action plan agreed with your customer.

### Hazardous materials

Strong acids, alkalis and solvents will be stored and used on site. These may have hazardous properties such as flammability, combustion potential, toxicity, corrosive potential and oxidising potential. Some chemicals may only possess a hazard potential if they have the opportunity to react with other compounds. Hazardous materials may take the form of liquids or solids such as powders, pellets and flakes. Metals for deposition may be delivered as anode bars, or as salts in or out of solution.

Inadequate control or accidental releases of hazardous substances on site or in transit could impact the workers, the local community and the environment as outlined below.

- **Contamination of soil, groundwater and surface waters (on or off site)** - Significant environmental impacts can occur through acute incidents and accidents such as a major spillage or via gradual or repeated leakage of raw material contaminants in to soil and waters. Surface waters are particularly vulnerable to chemical contamination. Chronic, undetected leakages on site can occur as a result of fractured vessels, seals, valves and pipelines. These are of particular concern where heavy metals are released. Remediation costs could be high, particularly if the site is in an area of high environmental sensitivity, for example, if located above a drinking water aquifer. Additional costs may include criminal or civil fines, ecosystem rehabilitation (e.g. fish restocking) and claims from third parties.
parties such as nearby landowners or residents.

- **Fire / Gas explosions** – Metal coatings processes may use a range of flammable products. There may be large quantities of solvent vapours within the production areas, which can explode if ignited. Explosions or fires can result in widespread contamination (e.g. through contaminated fire fighting water run off) and destruction, impacting not only the immediate site but surrounding land, rivers and communities. Compensation costs for such incidents are high and widespread remediation and rebuilding may be necessary.

- **Air pollution** (for more detail see Air Emissions section) - Releases of hazardous substances such as VOCs/organic solvents to the air could impact the workers, local environment and communities, potentially leading to large compensation claims.

Public anxiety, particularly from neighbouring residents, can be caused by a lack of knowledge regarding the nature of the chemicals being stored on the site, odours from the site, the potential for fires and explosions and the action that will be taken in the case of an accidental release.

**How can a business manage this risk?**

### Storage

- Label chemicals with appropriate, internationally recognised, diamond shaped hazard symbols.
- Chemicals with different hazard symbols should not be stored together - clear guidance on the compatibility of different chemicals can be obtained from the Materials Safety Data Sheet (MSDS) which should be readily available from the manufacturer and on site.
- Store chemicals in a dedicated, enclosed and secure facility with a roof and a paved/concrete floor. Chemical tanks should be completely contained within secondary containment such as bunding.
- Follow national regulation (if any) regarding chemical storage.

### Groundwater contamination

- Install devices to prevent spills and overfills, e.g. alarms to warn of overfilling and automatic shut-off devices.
- Install a layer of hardstanding in all areas at high risk of contamination to prevent ground infiltration by pollutants.
- Install secondary spill containment (bunds etc.) for storage units containing hazardous materials.
- Maintain and inspect storage units regularly.
- Consider installation and use of groundwater monitoring points on site to check for contamination.

### Fire and Explosion

- Control the effect of fires and explosions by segregating process, storage, utility and safe areas.
- Avoid potential sources of ignition including banning smoking in and around facilities.
- Introduce accident, fire and explosion precautions and emergency response plans and involve the emergency services and neighbouring community in the creation and practice of these plans to respond to major incidents at the installation.
- Provide the local fire department with a list/volume of products stored on the premises.
- Emergency storage lagoons may be needed to prevent contaminated firewater reaching watercourses.

### Water management and wastewater

Liquid wastes include waste water from surface preparation, overspray control or equipment cleaning, off-target or excess coating or surface preparation materials, overspray, spills and spent cleaning solutions. Most of the hazardous waste water comes from rinsing operations that follow cleaning and plating of metals. By increasing rinse efficiency, a facility can significantly reduce waste water flow.
Onsite closed-loop recycling is becoming more popular for spent solvents as disposal costs rise. Water-based liquids are usually treated onsite prior to discharge to publicly owned treatment facilities.

Rainwater runoff may become contaminated through contact with material stockpiles or airborne contaminants. Local communities and the environment may be affected by pollution due to discharge of untreated wastewater.

Most of the metal coating processes described use fresh water for make-up and maintenance of process fluids and for rinsing. Significant quantities of water can be lost through evaporation in processes operating above 60°C.

### How can a business manage this risk?

- Minimise the consumption of water used in production processes and equipment cleaning. By increasing rinse efficiency, a facility will reduce the volume of hazardous wastewater produced.
- Consider use of cascade rinsing, i.e. rinsing with progressively cleaner water.
- Recycle wastewater where possible.
- Recover metals from solutions by precipitation. Acids may be recovered by regeneration.
- Consign spent electrolytes and alkali cleaners to an appropriate effluent treatment facility or a waste disposal contractor.
- Design effluent systems to accommodate blending of acid and alkali discharges to reduce the need for pH adjustment.
- Ensure untreated wastewater does not discharge to watercourses through use of wastewater treatment facilities and monitoring of wastewater discharges.
- Segregate wastewater, effluent streams and rainwater to reduce the need for wastewater treatment.
- Install roofs where there is a risk that rainwater may fall on contaminated areas. Where necessary, rainwater should be captured and treated before discharge.

### Air emissions

Volatile organic compounds (VOCs) may be released from all process steps. These emissions may result from volatilization of solvents during storage, fugitive losses during use, and direct ventilation of fumes. Particulates and ozone may also be emitted during application of coating, drying and handling.

Acid based processes, filling of acid containers and venting of acid containers to relieve pressure changes, can release harmful gases and acid mists (for example the carcinogen chromic acid is widely used in electroplating). Some heat treatments use cyanide salt baths, which can release poisonous cyanide fumes. Electroplating can release volatile and sometimes foul smelling organic additives to the atmosphere.

Short term exposure to VOCs and acid mists can cause nausea, irritation and vomiting; longer term exposure can cause cancer, immune system and organ damage. Exposure to ozone can cause coughing, throat irritation, tightness in the chest and in the long term may cause chronic respiratory illness such as lung disease or asthma. Dust and particulates may be inhaled and cause respiratory disease including asthma in employees.

Dust, vented fumes, and odours can be a nuisance to neighbouring residential and industrial areas.

Silica has been used in the past as an abrasive in blast cleaning; this is now considered bad practice. Silica dust is also known as respirable crystalline silica (RCS) and can cause silicosis which leads to disablement and death.

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3 Suggestions for improving water use efficiency can be found here:
The generation of energy for processes requiring electricity or for operating machinery produces carbon dioxide. Carbon dioxide and other greenhouse gases contribute to climate change; production of these is often restricted by regulation (see ‘Financial Implications’).

### How can a business manage this risk?

- Use respiratory hazard control technology, (e.g. respirators) when exposure cannot be avoided, e.g. during maintenance.
- Monitor indoor air quality and use signage where there are elevated levels of emissions and personal protective equipment (PPE) is required.
- Limit worker exposure time and implement health surveillance.
- Install or upgrade abatement technology e.g. enclosure of equipment, appropriate ventilation with filters, wet or alkali scrubbers, gas balancing systems, baghouse filtration.
- Implement a formal Leak Detection and Repair (LDAR) programme for equipment, and where necessary, replace with higher quality items any equipment which generates significant fugitive emissions.

### Solid wastes

Solid waste generated from metal coating processes includes empty coating containers, coating sludge from overspray and equipment cleaning, sludge generated from electro (or other) plating, spent filters and abrasive materials, dried coating, and cleaning rags.

Some of these wastes are hazardous and must be disposed of to registered handlers. If recovery of metals from the sludges is not possible, they must be consigned for disposal in compliance with national legislation.

Improperly disposed of waste can lead to pollution and ground contamination.

### How can a business manage this risk?

- Return packaging of hazardous materials (wherever possible), such as empty drums, to supplier for reuse.
- Develop and implement a waste management plan covering all aspects of waste treatment on site. Wherever possible, priority should be given to reduction of wastes generated, and recovery and re-use of raw materials.

### Energy consumption

The metal coatings industry consumes energy during heating and through the use electricity for electroplating, electropolishing and anodising operations, drying, power fume extraction, and machinery operation. Companies consuming large amounts of energy may be obligated under emissions trading schemes (ETS). For example the EU ETS requires members to monitor and report their CO2 emissions and ensure that enough allowances (either allocated or purchased) are in place to cover their emissions for a compliance year.

### How can a business manage this risk?

- Improve thermal efficiency of heating equipment to minimise heat loss.
- Implement heat recovery processes.
- Monitor and target energy usage and implement behavioural change programmes.
- Consider fuel used onsite and whether there are opportunities to switch to cleaner fuels or renewable energy sources.

### Occupational Health and Safety

#### Burns and heat stress

High temperatures and direct infra-red radiation (IR) can cause fatigue and dehydration for those working in the vicinity.
Direct IR can also cause damage to sight. Burns and scalds may occur through contact with hot surfaces, metal or water especially during maintenance activities.

**Noise and vibration**
Noise and vibration are significant hazards where mechanical surface preparation is carried out prior to coating. Noise may reach levels that are hazardous to health, leading to symptoms associated with permanent deafness. Noise, particularly during unsocial hours, may cause annoyance or disruption to local communities.

Hand-arm vibration syndrome from the prolonged use of vibrating tools and machinery causes effects on the body’s blood circulation known as ‘vibration white finger’ (VWF). Other damage may be caused to the nerves and muscles of the fingers and hands causing numbness and tingling, reduced grip strength and sensitivity. Pain and stiffness in the hands, and joints of the wrists, elbows and shoulders are other possible symptoms.

**Machinery**
Moving parts of machinery can result in entanglement and entrapment. Poorly designed workstations can require awkward postures, twisting, bending or reaching motions that could cause musculoskeletal disorders.

**Electrocution**
Many processes use conductive and corrosive fluids. Staff working close to these fluids and to electrical equipment are at risk of electrocution.

**Manual handling and repetitive work**
Lifting and carrying heavy or awkwardly shaped objects, such as bags, can result in manual handling injuries.

**Collision**
This can take the form of people being hit by vehicles, or moving or falling loads. Collisions between vehicles can also occur. Heavy loads may be lifted and moved at elevated heights using hydraulic platforms and cranes present a serious safety hazard. Grinding and cutting activities may eject pieces of scrap metal, causing injury.

**Slips, trips and falls**
These are primarily caused by uneven surfaces, inappropriate footwear, poor lighting, weather conditions, trailing cables and pipe work, especially during unblocking, maintenance and cleaning activities.

**Confined spaces**
Using or maintaining metal coating equipment may require entry into dangerous confined spaces.

**Working hours**
Long hours or night shifts can lead to fatigue, decrease wellbeing and ability to concentrate.

**Asbestos**
Asbestos (a carcinogen when in the form of inhalable dust) has been used on a large scale for many years as a fire proofing and insulation material. The organisation should identify the presence of asbestos, confirm its condition and, where necessary, encapsulate or remove it. Particular attention should be given to buildings constructed between 1950 and 2000 when asbestos use was at its most extensive.

**Security**
Metal coating facilities could be targets for criminal attack due to chemicals and materials stored onsite.

### How can a business manage these risks?

**Burns and Heat Stress**
- Shield hot surfaces where close contact is expected and implement safety buffer zones.
- Reduce exposure times for people working in extreme heat and provide suitable PPE.
- Install cooling ventilation to reduce heat stress.

**Noise and Vibration**
- Conduct a noise survey and mark out dedicated areas with signage where there are elevated
noise levels and PPE is required.

- Enclose noisy machines to isolate people from the noise where practicable.
- Reduce vibration exposure times and provide PPE where people may be exposed to vibration.
- Limit scrap handling and transport during unsocial hours to reduce noise.

**Machinery**

- Train staff in correct selection, use and maintenance of PPE.
- Train workers in correct use of machinery and safety devices.

**Electrocution**

- Use well insulated hand tools.
- Ensure that equipment is grounded (connecting it to the earth) and bonded (connecting all exposed metallic items together so that no dangerous electrical potential differences can build up).
- Switch off power and place appropriate signs or labels before any maintenance work is performed.

**Manual handling and repetitive work**

- Redesign manual processes and rotate work tasks to reduce heavy lifting/repetitive activities, and where possible install mechanical lifting aids.
- Train workers in correct lifting technique.

**Collision**

- Separate people from moving equipment:
  - Ensure that the process layout reduces opportunities for process activities to cross paths; and
  - Install safeguards on moving parts of conveyor belts to reduce risk of entrapment of employees.
- Install walkways to separate people from vehicle movements to reduce risk of collision.
- Introduce a one way system for site traffic and introduce speed limits to reduce the likelihood of traffic accidents.

**Slips, Trips and Falls**

- Ensure that walkways are constructed of non-slip materials and route cables and pipework under walkways.

**Confined Spaces**

- Control entry into confined spaces and avoid it wherever possible.

**Working Hours**

- Implement a programme of assessment of routine monitoring of worker health.
- Implement a grievance/dispute resolution mechanism for workers.

**Asbestos**

- Remove friable asbestos using licensed contractors. This should be carried out in controlled conditions to ensure that there is no release of substances or materials to the environment.

**Security**

- Undertake a security vulnerability assessment and consider the need for upgrades to existing security measures.

### 3. Financial implications

Outlined below are examples of financial implications for businesses due to ineffective management of E&S risks related to this sector. These implications may in turn create issues for FIs.

- Significant capital investment in site infrastructure may be required to comply with planning constraints, permit / consent conditions and new environmental, health and safety requirements, especially if local communities raise concerns regarding the site operations.
- Fines, penalties and third party claims may be incurred for non-compliance with environment, health and safety regulations.
- Reputational risk through poor environment, health and safety performance may impact sales or cause the local community to no longer tolerate the company’s operations (loss of a ‘social licence to operate’).
- Injuries to employees may lead to increased payroll costs, lost production time and employee compensation claims.
- Fire/explosions can result in widespread contamination and destruction, impacting surrounding land, rivers and communities. Compensation costs can be high and widespread remediation and rebuilding may be necessary.
- Soil and groundwater contamination from accidental chemical releases can be costly to
remediate, especially if contamination affects neighbouring property, water supplies or public health.

- Many countries are signatories to the Kyoto Protocol and have adopted targets for the reduction of CO2 emissions. Where Governments have set up carbon emission reduction programmes industrial processes have been required to reduce their CO2 emissions through the setting of targets. This can result in a need for substantial investment in new/clean technologies to achieve the emission targets. These targets may be reflected in environmental permits.

4. Suggested due diligence questions

When assessing E&S risks, it is important to discuss with the customer how these risks are being managed. Below are suggested questions that can be used when engaging with management or on a site visit. You may wish to engage a specialist consultant to support you with this.

General
- Does the site have all the required permits in place?
- What processes are undertaken and are any hazardous chemicals used? How hazardous are the materials and have associated risks been documented and addressed in appropriate risk assessments?
- If on a site visit, note signs of poor housekeeping, inadequate/untidy storage areas and poor drum labelling. Look for evidence of any recent spills or releases of raw materials/product.

Management plans
Confirm that the business has put in place at minimum, the following items in its E&S risk management systems:

- Operational policies and procedures for managing environmental, health, safety, labour and community matters. These systems should cover both employees and contractors.
- Accountability and responsibility for environmental, health and safety, and labour matters. Is there evidence of management review/demonstrated involvement in environment, health, safety and hygiene management? This should include senior management oversight.
- Improvement objectives, targets, project plans and monitoring programmes.
- Training for personnel, including ensuring that personnel are trained in the risk associated with their job and the correct use of PPE;
- Regular inspections, checks and audits with records to demonstrate achievement of the required level of performance against legal requirements.
- Energy conservation schemes and development of programmes to reduce greenhouse gas emissions.
- Emergency plans for environment, health and safety accidents or hygiene non-compliance incidents.
- Waste management plan (waste minimisation, re-use, recycling, monitoring).
- Stakeholder engagement plans / programmes.
- Financial investment plans directly or indirectly related to management of environment, health and safety and labour issues.

Air emissions management (including noise)
- What levels of air emissions are permitted? Have permitted levels of emissions been exceeded in the past?
- Has pollution abatement technology been installed to reduce atmospheric emissions?
- Has employee exposure to potentially harmful gases been assessed and controlled?
- Are there any VOC abatement technologies or measures in place? Is there a Leak Detection and Repair (LDAR) programme?
- Are metal products/materials moved around the site by conveyor or by vehicle?
- Is there local exhaust ventilation? Is it maintained?
- Are there any dust control measures? Are they used and effective?
- If on a site visit, note the noise and dust levels and any odours at the site. Is there any build-up of dust on machinery or other surfaces? Is there any evidence of deployment of noise/dust/odour abatement measures or a requirement for such measures (e.g. hearing protection)?

**Water abstraction & management**

- What volumes and quality of water are required? Where is water obtained from?
- Are measures in place to recycle water? Will there be any planned changes which may affect the demand for water? Will existing resources be able to meet demand?
- Check regulatory compliance - are all necessary licences/permits/discharge consents in place?

**Wastewater management**

- What liquid effluents are produced? What discharge control measures are employed?
- Is effluent and wastewater treated before discharge? If so, does the wastewater treatment plant discharge to a local watercourse or the municipal wastewater treatment works? Higher environmental risks will be associated with facilities discharging to water courses without adequate treatment.
- Is the wastewater quality tested and if so, for what? Where are the samples taken from, and how often? Do the discharges have to meet set standards?
- If on a site visit, check the condition of the treatment plant and location of discharge points for effluent and wastewater from the facility. What does the quality of these discharges look like? Note the colour and appearance of adjacent watercourses.

**Solid waste management**

- What is the nature of solid waste disposal?
- Are measures in place to minimise, re-use or recycle waste products?
- How is hazardous waste removed? How are appropriate contractors selected and monitored to ensure that the waste is being taken to an appropriate waste disposal facility?
- If on a site visit, check that solid waste storage equipment is in a good condition, that waste storage areas are clear of debris and that skips are covered to prevent waste escaping, for example, check that waste containers have lids or are stored in an area with a roof. Check for flora/vegetation zones near storage sites that are not growing very well as this will indicate the possibility of pollution.

**Transport of materials to or from the site**

- How are chemicals transported (e.g. road, water or rail), and what are their potential impacts?
- Where are the areas for loading/unloading of materials located? Are they located near any water bodies or other possibly sensitive features? Is there any containment to prevent run-off of contaminated water?
- Does road haulage cause excessive traffic through any neighbouring residential areas?
- If on a site visit, check the age and condition of equipment and vehicles. Look for signs of wear and tear, degradation, leaks and breaks.

**Storage**

- What fuels and materials are stored in bulk on site?
• What is the potential for spillages and leakages to enter surface water drainage systems? Are surface tanks and material storage areas hard surfaced and bunded? Are alarms installed to detect leaks from storage areas?

• If on a site visit look to see whether these storage facilities are in good condition. Is the volume of the bunded area adequate to contain the stored materials? Are they regularly cleaned and inspected and tested for leakages?

Health & safety
• Do staff wear PPE? Is there signage to inform staff where PPE should be worn?

• Is first aid equipment available? Is there a trained and competent first aid resource on site?

• Is there a worker health monitoring programme? What does it check for?

• Have workers been historically exposed to materials that could potentially lead to occupation health diseases?

• If on a site visit, check signage around the site:
  – Does it convey the health and safety risks?
  – Are fire exits and/or evacuation routes clearly marked?
  – Are there demarcated routes for pedestrians and vehicles?

• If on a site visit, check the age and condition of equipment, look for signs of wear and tear, degradation, leaks and breaks. Check for automatic safeguards on machinery to prevent accidental injury.

Incident management
• Have there been any recent incidents on site such as fatalities, fires/explosions, spills?

• Assess emergency responses to fires, major spills and explosions (in some countries it may be a legal requirement to have an emergency response plan). Does the organisation have an emergency response plan which includes an engagement plan to disseminate information to local communities at risk?

• Does the organisation have insurance to cover any significant damage to the environment/community/operations (this may be covered by public liability insurance or the organisation may be party to an industry insurance scheme). Review the terms of the cover and identify any exclusions relevant to environmental and health and safety matters. Identify the number and type of claims against insurance in the past.

• If on a site visit, note if safety equipment is clearly signed and readily available, e.g. fire extinguisher(s), eye wash, safety shower, first aid equipment, emergency escape routes, emergency stop, decontamination equipment, and absorbent materials?

Inspections & regulation
• Check the conditions and duration of validity for all permits. Will any planned changes at the facility require revisions to the permits or require new consents?

• What systems are in place to check and maintain assets and infrastructure?

• Have the premises been inspected recently by the regulatory authorities for health and safety, labour conditions, hygiene and environment? What were their findings?

• Has the organisation been subject to environment, health and safety or quality audits by customers/insurers? What was the outcome of these audits?

• Does the organisation have insurance in place to cover the recall of contaminated/faulty products? Have there been any recent product recall incidents? If yes, what did these relate to?

• Review historical and projected trends for environmental fees and fines. It is also suggested that contact is made with local...
regulatory agencies to determine compliance and whether complaints have been made by the public.

**Investment**

- Where are the organisation's main markets? Are they manufacturing or exporting to the EU? Are product standard regulations such as REACH relevant?

- Review budgets for capital expenditure and operational expenditure to cover EHS matters. Does the business plan have line items for Environment, Health and Safety improvements as well as asset management and maintenance?

- If investment or refinancing will lead to restructuring of the organisation what will be the potential impacts on health and safety at the operation and wider community? Have these been considered and assessed by the company?

- If the company plans to invest in new technology, what will be the impacts and benefits for human resources?

**Social, labour and community**

- Check that labour standards, contracting and remuneration are in line with national law and are consistent with the average for the sector.

- Check that hours worked, including overtime, are recorded. Staff should receive written details of hours worked and payment received.

- Check that wages and working hours are consistent with the average for the sector and national standards.

- Has the company received inspections from the local labour inspectorate in the previous three years? Have these resulted in any penalties, fines, major recommendations or corrective action plans?

- Does the organisation have a grievance mechanism, which allows employees to raise workplace concerns?

- Are employees free to form, or join, a worker's organisation of their choosing?

Take note of/ask questions relating to any activities that manage risks as listed in the earlier sections of this document.
5. References and additional sources


