Group health, safety, environment and security handbook

GR-HSE-011 February 2006 Version 7

Our vision to be the acknowledged leader in seabed-to-surface engineering and construction is founded on our corporate values and our commitment to: Nobody hurt, no damage to assets or the environment. This means that you are personally committed to creating an advanced safety culture through your personal leadership, regardless of position and location, and your active engagement in PASS – Positive Attitude to Subsea Safety.

A message from the Chief Executive Officer

Acergy operates in harsh and challenging offshore environments. For this reason, close attention to health and safety issues is vital to ensure the safety of you and your colleagues and successful project delivery for our clients.

Every job that we complete safely and profitably enhances Acergy's reputation and creates the framework for future success. Because I want us all to share in this success, I ask you to work with us to achieve our vision of no harm to people, and no damage to our assets or the environment.

We can make this vision a reality if we have the right attitude to health, safety, environment and security (HSE and security) management and behave correctly: by following group instructions and procedures, by upholding our own high standards and never cutting corners, by helping others who may be new to a particular worksite and by challenging those who disregard our rules. We all have a part to play. Our project management teams will help you succeed by setting safety priorities as part of the project work execution. I believe that safety, quality and good management are inextricably linked. A safe worksite is a well run worksite. A well run worksite is a safe place to work.

This handbook will help you prioritise safety by giving you an overview of how we manage HSE and security issues across our business. It also introduces the key management principles that you must follow on our barges or ships and in our yards or offices.

Please take the time to read it carefully. Keep it with you as a useful reference and act on the advice it offers. Make sure you do not become complacent. Remember: it's vital to maintain your safety focus at all times. If we all do so, we can create a business which is second to none in terms of safe project delivery.

Tom Ehret Chief Executive Officer

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Group HSE and security policy

Acergy is a seabed-to-surface engineering and construction contractor. We plan, design and deliver complex, integrated projects in harsh and challenging environments for the offshore oil and gas industry worldwide. We are committed to a policy of achieving HSE and security excellence in all of our business activities and operations. Through our *Management System* we have established a framework for setting and reviewing HSE and security objectives for the group.

Our HSE and security philosophy is based on the international standards of OHSAS 18001 for occupational health and safety, ISO 14001 for environmental management and international best practice and standards for security. This is supported by management commitment, personal accountability, training, fairness, and performance measurement. Accordingly, we are committed to preventing injuries, damage to the environment and damage to or loss of property or equipment.

Everyone working at Acergy has a duty to comply with this policy and to embrace the following principles, to which management is fully committed:

- ➜ Uphold HSE and security as a core business value of the group to achieve the elimination of unsafe actions and conditions.
- ➜ Communicate to our people that anyone who observes an action or condition that is unsafe has a right and duty to intervene and stop the operation, and that this action will be supported by management.
- ➜ Foster a positive and progressive HSE and security culture throughout our organisation ensuring that all our people, whether employed directly by us or working on our behalf, work responsibly to meet our HSE and security standards whilst complying with the applicable laws, regulations and good industry practices in each country of operation.
- ➜ Provide the resources, training and development to ensure that work is carried out safely, professionally and with full consideration for environmental protection.
- ➜ Identify hazards and assess risks so that we actively manage our operations safely.
- ➜ Investigate all events where injuries, damage to property or harm to the environment has occurred or could have occurred. Furthermore, we will learn from such events to prevent them recurring in the future and operate a ‘just’ system of accountability when dealing with HSE and security infringements.

If we all work in accordance with these principles we will create a culture that properly values HSE and security and improves our business performance on a continuous basis.

Introduction

We believe that all our people are entitled to the same level of protection regardless of where in the world they work. To ensure a consistent HSE and security culture, we apply the philosophy and policies described in the document *GR-HSE-001, Group HSE Management Instructions*, which sets out our minimum HSE standards. That document is supported by the other procedures, instructions and guidelines in our *Management System* at corporate, regional and local level.

The guidance given in this handbook:

- ➜ Tells you about the group's HSE and security culture and vision.
- ➜ Provides an overview of how we expect you to work safely using the processes which form the elements of our *Management System*.
- ➜ Lists issues concerning your safety with which you need to become familiar when you join a worksite.
- ➜ Identifies our collective responsibilities and the role of the HSE and security departments with regard to HSE and security management.
- ➜ Identifies key features of HSE and security management process rules which you must understand and work to, if we are to achieve consistent HSE and security excellence.
- ➜ Encourages you to address unsafe conditions in your work place or stop unsafe behaviour in work colleagues.
- ➜ Promotes the reporting of all near miss incidents, damage and injuries so that we can learn from mistakes and make improvements.
- ➜ Provides lists of topics to help you assess the risks associated with work tasks and to assist you when involved in toolbox talks.
- ➜ Gives you the opportunity to record your own personal commitment to our safety process and identify what you, personally, have achieved.

If you have only been working with us for a short time or have just joined Acergy, you may be unfamiliar with how we manage HSE and security at your work place. Please do not hesitate to ask your supervisor to explain anything you are unsure about or tell you more about HSE and security.

HSE and security management system structure

Throughout this handbook, we refer to our *Management System*. The system consists of the instructions, procedures and guidelines that describe how we conduct all aspects of our business. The HSE and security process is just one of 15 key elements in our *Management System* and has a comprehensive set of documents covering all aspects of management. The relationship between group, regional and operating-unit HSE and security documentation is illustrated in the diagram opposite.


Vision
Model
Policies
Objectives and targets
Standards
Group process and procedures
Regional processes
Africa Mediterranean
Asia Middle East
Northern Europe Canada
South America
North America Mexico
Ship management division
HSE and security plans integrated into project

HSE and security induction – what you need to know

Everyone working for Acergy is given their own copy of this HSE and security handbook when they join us.

We recognise that you have the necessary professional qualifications, competencies, skills and experience to fulfil your role within the group, but in order to make sure you are aware of recognised HSE and security best practice we also provide you with specific instructions and guidance on the particular features and activities of your new worksite. The worksite manager or supervisor is responsible for arranging your 'safety induction' as soon as possible after your arrival.

Your induction will be in accordance with *GR-HRM-005, Induction Policy* and may include the following issues:

- Organisation of the worksite – roles and responsibilities.
- The emergency plan and its location.
- Emergency alarms and responses.
- Overview of work areas, 'no-go' areas and general traffic areas.
- Muster points.
- Escape routes.
- Survival craft and equipment.
- Man overboard actions.
- Fire fighting equipment.
- First aid treatment and location of equipment.
- Safety signs and their meaning – PPE areas, first aid, warnings etc.
- Identification of safety representatives.
- Review of safety noticeboard.
- Smoking policy and smoking/no smoking areas.
- Project/location specific information.
- Documentation and procedures relevant to location.
- Hazard identification and risk assessment system at the site.
- Permit to work system and type of work which requires a permit.
- Hazardous areas and precautionary measures.
- Confined space working.
- Handling of dangerous substances.
- Protective clothing, equipment and what you must use in your job.
- Reporting of incidents, damage and injuries.
- Action in the event of incident, damage or injury.
- Reporting of safety observations.
- Worksite waste disposal policies.
- Worksite security procedures.

When you have read this HSE and security handbook and attended your induction, you will understand better how we can all successfully manage HSE and security together. Remember to ask your supervisor or manager for further help if you do not understand any aspect of the handbook or the induction.

Cultural awareness

Acergy operates globally and you may be required to work in or travel through parts of the world where the culture and environment is not familiar to you. Please behave respectfully towards the citizens and customs of other countries at all times.

In most instances, Acergy will arrange the services of reputable agents to assist in your transfer to your place of work and to provide help and assistance in dealing with issues such as:

- Personal security.
- Health.
- Personal property and baggage.
- Visas and travel documents.
- Internal transportation, meals and accommodation in transit.

Your Acergy regional management will also provide you with current information and advice on ways to minimise exposure to particular health risks in the countries in which you will work or through which you will travel. Please take the time to study the information and advice provided. We strongly advise you to take this advice seriously to preserve your health, security and safety.

Alcohol and drugs

Acergy prohibits the possession or use of alcohol or illegal non-prescribed drugs on any of our offshore worksites, ships or barges. Onshore offices, workshops and yards must also maintain an alcohol-free work environment. Illegal, non-prescribed drugs are prohibited at all times on our premises.

Please refer to the full drugs and alcohol policy statement in document *GR-HSE-001 Group HSE Management Instructions*. Our policy includes testing individuals for drugs or alcohol on site where there are grounds for suspecting their use, or if an individual is involved in an incident.

If you are taking medicine prescribed by your own doctor, it is important that you tell the medic, nurse, supervisor, HR department or HSE and security department because this information may be crucial in an emergency. Some drugs can cause drowsiness, so we need to know in case this presents a safety risk.

Use of knives

If at all possible, the use of knives in the work place is to be avoided and an alternative cutting tool used instead. In some instances a knife may be the safest and best tool to complete a task – but even if this is the case, the decision to use a knife should be subject to a risk assessment.

The following general principles must be followed:

- All cutting tasks will be assessed to eliminate the use of knives where practical. The assessment must take into account the risk of harm to people rather than the convenience of using a knife. The worksite will clearly identify the cutting tools to be used for both generic and specialist cutting operations.

- Where knives have been assessed as the most practical safe solution, it is recommended that the person using the knife wears cut-proof gloves, such as Kevlar or fine chain mail, to protect the hands.
- Additionally, if a knife is to be used for a particular special cutting task, it must not have a sharp pointed blade. Such points must be blunted to minimise the risk of stabbing.
- Knives will not be used to cut ty-wraps. Cutting nippers must be used.
- The correct tools for electrical wire stripping and cutting operations are stripping pliers and cable cutters or cable stripping scissors.
- When removing the sheath of multi-wire cables and if a knife has been assessed as the most practical cutting solution for exposing these internal wires, the knife point must be blunted and the operator preferably wearing cut-proof gloves as stated above. The cable being cut should be fixed mechanically.
- A small tube cutter may be used for pvc hose cutting operations.
- Divers may continue to have a knife under-water as it is an essential part of their safety equipment.

We encourage feedback or suggestions regarding alternative tools for all cutting tasks. If the supplied alternative tools fail to prove as versatile or efficient as the knife, do not revert back to knives; please feedback this information as we wish to continue to explore all other alternatives.

Jewellery

All jewellery must be removed or covered and loose clothing or long hair must be secured prior to work activities. People involved with machine tools, rotating machines or manual handling must remove wrist watches, bracelets or rings. If this is impossible, items must be taped securely to avoid the possibility of snagging.

Smoking

Each Acergy office, barge, ship and worksite has defined the areas where smoking is permitted. You may smoke only in the designated areas. Please always comply with the ‘no smoking’ signs.

Fatigue

Fatigue due to long working hours, or lack of rest caused by circumstances such as travel, may affect your ability to concentrate, presenting a safety hazard to you or your work colleagues.

Please notify your supervisor if you feel that your concentration is likely to be affected by fatigue. Your supervisor will make appropriate arrangements to reduce the risk, for example by temporarily giving you a less demanding job to do or making a substitution so that your fatigue will not lead to harm or injury.

Your duties and responsibilities

Your job description specifies your work duties and responsibilities, but you also have a duty to ensure the safety and welfare of you and your work colleagues as well as preventing damage to equipment and the environment.

To make sure that we all work to the same basic standards:

- ➜ Learn, understand and work to outline instructions set out in this handbook.
- ➜ Read and understand the procedures listed in this handbook.
- ➜ Work safely in accordance with the group HSE and security processes and specific project procedures; seek help from your supervisor if you are unsure.
- ➜ Think about the hazards and risks you and others may be exposed to before you start any task and take the necessary precautions to minimise these risks.
- ➜ Do not take short cuts or become complacent with regard to safety in carrying out your duties.
- ➜ Take an active part in the promotion of working safely.
- ➜ Be aware of safety issues at all times even after work is over – remember injuries can just as easily happen when you are off shift.
- ➜ Bring your concerns on all HSE and security issues to the immediate attention of your supervisor.

- ➜ Stop or shut down any activity or operation which is unsafe (including those of contractors).
- ➜ Report promptly all unsafe conditions and practices (including those of contractors) to your supervisor.
- ➜ Report all injuries, no matter how minor, to your supervisor or the medic promptly.
- ➜ Report every spill/release to your supervisor.
- ➜ Perform your tasks safely, with regard for your own personal safety, the safety of fellow workers, and the protection of the environment and company property.
- ➜ Always use the proper safety equipment and keep to safe work practices and established safety standards.

Managers' duties and accountability

Managers have overall responsibility and accept that they will be held accountable for the health and safety of their people and for the protection of people, the environment and equipment on their worksite.

Their responsibility includes activities such as conducting risk assessment and evaluation, providing safe operational procedures, providing safe equipment, ensuring a robust permit to work system is used where special activities or non routine work takes place, ensuring good worksite housekeeping, and carrying out safety induction/familiarisation training. Also, they have a responsibility to listen to your concerns with regard to safety, and to act on them.

Managers and supervisors must also:

- ➜ Communicate and enforce health, safety and environmental policy and standards.
- ➜ Ensure accountability through employee performance reviews, counselling, and disciplinary action.
- ➜ Set a good example through personal leadership and the promotion of health, safety and environmental initiatives.
- ➜ Lead the investigation, contribute to the reporting and ensure the follow up of injuries and potentially dangerous incidents, and give appropriate feedback.
- ➜ Ensure people working under their supervision have received adequate training to enable them to perform their assigned tasks safely.

Health, safety and environment (HSE) department roles

Acergy regional business and operations groups have HSE departments. These are responsible for ensuring the implementation of the HSE policies. They also generate and measure against specific HSE improvement action plans. They provide independent audits of worksites to measure the effectiveness of the systems so that they can provide advice and assistance to improve safety performance.

When accidents happen, our HSE teams co-ordinate the analyses of all incidents, damage and injury events and provide investigative services for the more serious events. Investigation findings are used to provide a basis for continuous improvement to our procedures and processes.

Safety representatives

The group encourages the active participation of all employees in promoting safe working practices throughout our operations. While our systems and processes are designed to provide a safe place of work, we provide regular forums for you and your colleagues to discuss issues of concern and make proposals to improve HSE performance.

As appropriate, we expect worksites to nominate worker safety representatives to act on behalf of peer groups at HSE meetings. These representatives are usually identified clearly in the work areas by means of posters or similar notices.

Safety communication

At Acergy we encourage you to bring HSE issues to the attention of any of the following:

- ➜ Your worksite manager.
- ➜ Your immediate supervisor.
- ➜ A member of the worksite safety committee.
- ➜ An elected safety delegate.
- ➜ A member of a team involved in hazard identification and risk assessment exercises.
- ➜ Your team when participating in a toolbox talk.

Acergy senior managers regularly visit worksites to find out about safety concerns. Please take the opportunity to speak to them because we are interested to hear your ideas on how safety performance can be improved. Of course, safety communication is a 2-way process; so if you speak to a manager about safety concerns, Acergy will respond – to let you know what action is being taken or to explain why action will not be taken. Managers have a duty to respond to you in a timely manner with their findings and actions.

Members of Acergy HSE departments operate an open door policy. Concerns raised with an HSE advisor or manager will be treated in confidence if you wish.

If you find it difficult to raise your safety issue with any of the people listed above, or feel your concern has not been fairly addressed, you may contact the appropriate regional HSE and security department manager or the Corporate VP-HSE.

HSE and security practice at onshore and offshore worksites

We have set specific rules which must be complied with on all worksites, whether offshore or onshore, in an office, fabrication yard or workshop. The procedures for ships and barges are described more fully in the document *GR-OPS-005, Barge and Ship HSE Practice* and in the relevant barge or ship's marine operations manual. Your supervisor will be able to help you to access these and other HSE and security documents.

We ask you to remain alert to other operations going on around you. Never take short cuts that could put your own or other people's safety at risk. Do not assume that a piece of equipment is safe to use because it has been delivered to the worksite. Make sure it has been checked thoroughly before it is used for the first time.

If you work offshore you should be especially careful when the motion of the ship or barge is being adversely affected by weather conditions.

Personal Protective Equipment (PPE)

The planning and assessment of work activities will take account of any hazards and where practicable, the risk from these hazards will be eliminated or reduced. A residual risk may remain, but we can often reduce this further by wearing appropriate PPE. It is Acergy's policy to ensure that suitable PPE is available to everybody and always used in work activities.

Your full compliance with safe, well proven working procedures should prevent accidents and consequential injuries. PPE is a secondary, personal line of defence but may not protect you if you fail to act correctly.

The following items are the minimum personal protection that must be worn when you are on the deck of a barge or ship, in a workshop or in a yard or quayside:

- Hard hats (all deck or yard activities).
- Long sleeved coveralls (all deck, yard or workshop activities).
- Safety boots/shoes (all deck, yard or workshop activities).
- Safety glasses/goggles.
- Gloves.

Additional specialist PPE will be made available as required and may include:

- Ear plugs (e.g. on pipelay firing lines).
- Ear defenders (e.g. in engine rooms or close to generators).
- Dust masks (e.g. when mixing powders or during blasting operations).
- Lifejackets (e.g. when working close to exposed side or over side).
- Safety harnesses (e.g. when working at height when sides are unprotected by barriers).

Risk management, assessment and evaluation

Risk management is a key component in the *Management System* that identifies, evaluates and determines the means of reducing risks to an acceptable level across a wide range of factors to protect people, the environment, assets and to avoid loss.

The group has procedures to systematically identify and evaluate the hazards and effects that might arise from our activities and from the materials that are used or encountered in them. The scope of the risk management process ranges from design through to fabrication, installation and operation.

Risk evaluation, and the subsequent decision-making, can range from an individual conducting the process mentally, through to the application of formal methods which are documented and follow set protocols. The main steps in risk management however are common, whatever approach is employed and we apply the process equally to health, safety, security and the environment.

Sometimes, the residual risk may not always be reduced to the lowest possible factor, but identification of these risks will ensure that procedures reflect their severity and allow them to be effectively managed.

The following quantitative and qualitative risk assessment tools are available, depending upon the equipment, the system and the activity or process to be assessed:

Hazard and operability studies – HAZOP
The application of a formal critical examination of the process and engineering intentions of new facilities, to assess the hazard potential from incorrect operation or malfunction of individual items of equipment and the consequential effects on the facility as a whole. HAZOP usually examines deviations from the design intent.

Hazard analysis – HAZAN
Intended as a subsequent action to the HAZOP, the HAZAN is a hazard analysis used to determine the magnitude of a potential problem and its potential for harm.

Hazard identification and risk assessment – HIRA
Also known as HAZID, it is similar to a HAZOP, in which guide words are utilised to identify causes and consequences of hazards. Used normally to link failures to hazard situations. This is the most often used risk assessment tool within Acergy.

Failure modes, effects and criticality analysis – FMECA
This is a sequential analysis and evaluation of the kinds of potential failures and their likely effects, expressed in terms of maximum potential loss. Normally utilised to examine critical vessel systems. Output is used to design in redundancy to safety critical systems.

Fault tree analysis
An analytical technique used to trace the chronological progression of factors (events) contributing to an accident situation or system failure. It works on the principle that all accidents or system failures have multiple causes.

Job safety analysis – JSA

Involves a systematic identification of hazards and the safeguards for job or task activities as performed at that worksite. The aim of the JSA is to clearly identify the hazards to which people will be exposed on a daily basis at the specific worksite as they carry out their normal duties. This risk assessment process is explained in *GR-HSE-002, Hazard Identification and Risk Assessment Procedure*.

In addition to these tools and processes, risk management also defines a way of thinking and acting – highlighting the need to remain alert to hazards, the potential risks associated with them and the consequences that could be realised.

Management of change to operational processes

Experience has shown that undesired events such as injury or damage, are often caused when unexpected changes result in a deviation from the planned course of action. When we make changes to the way we execute a task we need to plan with the same rigour that we exercise in all our other activities. We must always re-assess risks associated with the change. We do this through a defined process which is described in document *GR-HSE-003, Management of Changes to Worktasks Guideline*.

Its key features are that:

- ➜ Changes to the planned procedure are subjected to hazard identification, risk assessment, and control analysis before the work is carried out.
- ➜ People involved in the work must be told about the new procedure, task plan or equipment and risks prior to the work.

This may mean that you have to suspend work until any change has been re-assessed and the revised procedures explained to everyone involved in the task.

Permit to work

Our worksites operate a permit to work (PTW) system to control non-routine or special work activities that could present a health and safety risk or danger to the environment. The system is fully explained in the document *GR-HSE-006, Permit to Work Procedure*. Work that requires compliance with the procedure includes:

- Non routine welding, burning or grinding where flammable materials are present.
- Dealing with explosives.
- High pressure water jetting, grit blasting.
- Pressure testing.
- Breaking into pipelines/hoses containing residual pressure or combustible liquids.
- Isolating systems from energy sources to allow maintenance or repair.
- Working where you can fall 2m (6' 6") or more where the edge is unprotected.
- Working over water.
- Removing protection systems (e.g. machinery guards).
- Entering confined spaces or where the atmosphere is suspect.
- Spray painting in closed spaces.
- Work involving ionising radiations or radioactive materials.

Work may need to be carried out by specialists with specific training or qualifications and require dedicated supervision at all times.

Only people who have completed PTW training are allowed to raise a PTW.

Safety observations

We all have a part to play in the management of safety. You are responsible for looking after your own safety and the safety of those around you. By keeping alert you can help to eliminate unsafe behaviours, correct unsafe conditions and contribute to safety excellence on your worksite. *GR-HSE-009, Safety Observation Guideline* tells you more about our reporting system.

If you see something that looks unsafe, either stop it, correct it or bring it to the attention of somebody who can stop it and correct it. Then fill out a safety observation report so we can see how active the worksite has been in promoting safety by stopping unsafe acts, unsafe behaviour and unsafe conditions. The system is also used to highlight how people acted, the way equipment or the worksite was configured, the way in which work was performed and any elements of special note because they helped to reduce risk.

The reports will show if there are common trends that we can address through training or other corrective action.

Undesired event reporting and investigation

Undesired events are actual events. They include injury, damage and (near miss) incidents. They are events that we all want to avoid.

This handbook is designed to help you raise your safety awareness to complement the safety procedures, safety training, induction, PTWs, HIRA meetings and other safety elements that you will become familiar with in your work place. The chances of an undesired event occurring will be reduced if you follow the rules.

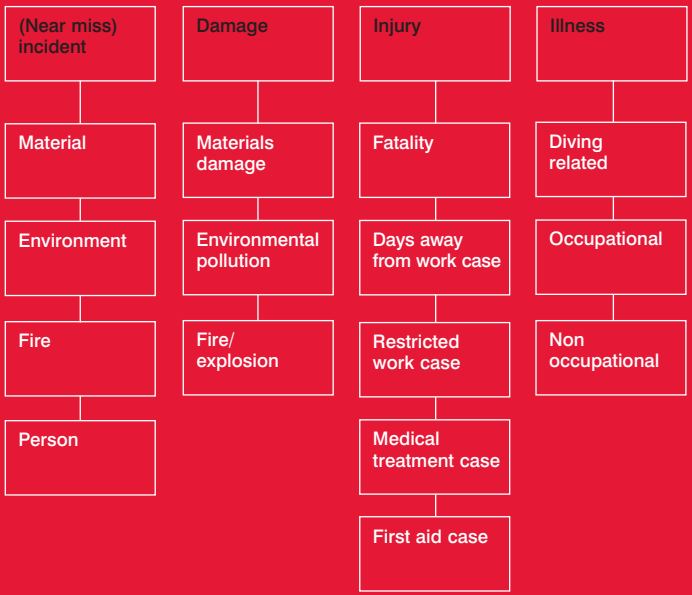
However, if an undesired event does occur, it is essential that it is properly reported so that managers can investigate and take the necessary actions to stop it happening again. The procedures we have developed are *GR-HSE-007, Undesired Events Reporting Procedure* and *GR-HSE-008, Incident/Damage/Injury Investigation Guideline*. They are important tools for the management of HSE and security.

All undesired events are recorded on the group 'undesired event report' database. You may have to contribute to a report if you are injured or involved in an accident; please remember, the report should only contain facts (do not include your opinions or make unsubstantiated claims). The events will be investigated either by the worksite manager or a special investigative team, depending on the severity of the event.

Please remember to report all undesired events and injuries promptly.

Classification of undesired events

There are four main classifications and 15 sub categories.



(Near miss) incident
This is an event which under slightly different circumstances could have resulted in damage or injury. An incident actually happened but no actual damage or injury was sustained.

Damage
Damage to materials, property or equipment, or where harm is caused to the environment are included in this class. Damage specifically caused by fire or an explosion is also identified.

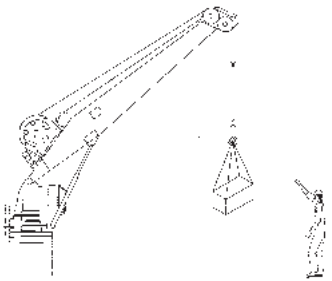
Injury
Describes events in which people are hurt and have sustained an injury. Most sites will have trained first aiders available. In the case of the larger ships, barges or yards, a medic or doctor will be available on site to treat the injured person. The medic or doctor will categorise the 'injury'.

The classification of injuries is quite complicated but the group has provided guidance on the matter in *GR-HSE-019, Guidelines for the Interpretation of Injuries* in UER system. This is normally dealt with by the worksite medic.

Illness
This category is used for work related illnesses. For example, decompression sickness related to diving operations.

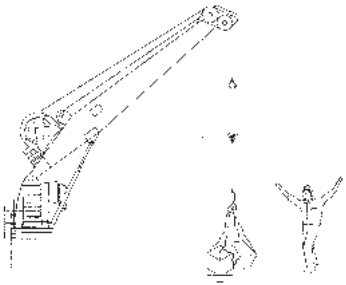
Examples

Safety observation



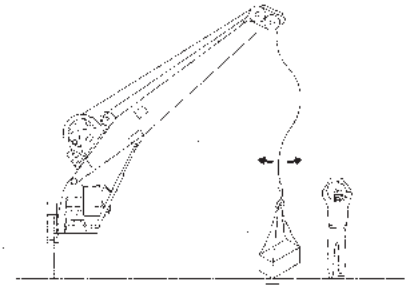
Unsafe condition of crane wire. Loose strands on wire.

Damage



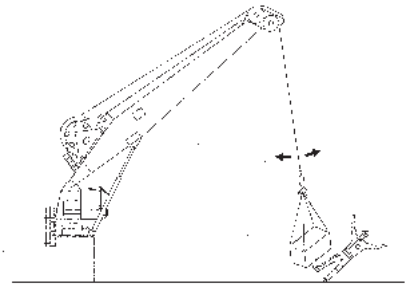
Material – Load released when wire broke and damaged as a consequence of it falling. Crane wire was also damaged.

(Near miss) incident



Load was swinging but did not hit anyone and was not damaged.

Injury



Day away from work case (DAFWC) injury caused when load swung and struck a person resulting in being unfit for work for the next shift or longer.

Emergency situations

During your worksite induction you will be informed about the general alarms and specific procedures that you must follow in case of fire or other emergency situations. When you hear an alarm, stop work, make your work place safe and go immediately to your designated muster station/assembly point.

If you discover a fire, raise the alarm immediately. Only tackle the fire if you are familiar with the fire fighting equipment and are sure you will not endanger your own life.

Please keep any reference information on the location of fire appliances, muster stations, alarms and other safety resources in a safe place where you will not lose it. For example, in the pocket at the end of this handbook.

The document *GR-HSE-004, Group Emergency Preparedness Guideline* provides the basis for the regional and worksite emergency response plans that have been developed for your protection. Please study the plan for your work place and learn how to respond in an emergency.

Harmful chemical substances

We want to be sure that chemicals used in our work present the minimum risk of injury to people or harm to the environment. We can achieve this by identifying our needs and finding chemicals which have the least toxic effects. The nature of some chemicals means that we cannot always entirely eliminate all hazards, but we can minimise the risk by providing clear instructions for the safe use of the substances, including the PPE you must wear.

We provide data sheets (MSDS) and assessments for all the chemical substances you will find where you work. These describe the procedures to be used, precautions to be taken and treatment needed in the event of spillage or contamination. More information is given in the document *GR-HSE-010, Guidance for Using Hazardous Substances*.

Never use any chemical that you are unfamiliar with unless you have read the relevant instructions covering its use. Check with the medic or safety officer who will provide you with the assessment and data sheet.

Lifting operations

Much of our work involves lifting using cranes or other lifting equipment. We have developed very specific rules covering the use and maintenance of this equipment, set out in the document *GR-OPS-008, Instructions for Lifting Equipment and Operations on Barges, Ships and Yards*. Some of the key issues from these rules are that:

- ➜ You must be adequately trained and authorised before you can operate cranes, winches, fork lifts, jacks and any other lifting equipment.
- ➜ Anyone using lifting equipment must be sure that it is fit for purpose and has up to date certification showing that it has successfully passed a test of its lifting capability. Prior to use ensure that you understand and confirm with your supervisor the colour code system for in-date lifting and rigging equipment.
- ➜ The route for a lift must be clear of people and obstructions.
- ➜ Equipment used for lifting people must be designed for this purpose. Check that equipment is marked ‘man-riding’.
- ➜ Never use a personnel transfer basket to carry more than the stated number of people.
- ➜ Never work under a suspended load.

Manual handling

Analysis of industrial injuries has shown that some 25% of all injuries are associated with incorrect manual handling of materials. So make sure you always assess the risk prior to the lift and use lifting or carrying aids whenever possible. If the load is heavy or difficult to grip – get help. Do not lift a load you cannot carry comfortably.

Follow these basic rules to reduce the risk of injury if you need to lift or carry something.

How to lift

- ➜ Make sure the object is not too heavy or clumsy, so that you can maintain your balance.
- ➜ Stand close to the load with your feet apart for good balance.
- ➜ Bend your knees and straddle the load.
- ➜ Get a secure grip with your palms.
- ➜ Lift gradually by straightening your legs – do not jerk.
- ➜ Hold the load close to your body with your elbows close to your sides.

How to carry

- ➜ Keep the load close to your body.
- ➜ Make sure you can see where you are going and the ground ahead.
- ➜ Do not twist your body when you change direction, turn using your feet.
- ➜ Don't change your grip while you are carrying the load.
- ➜ Be aware of ship or barge movements, especially in rough weather.

How to lift loads

1. Wrong posture – legs straight, bent back.
2. Correct posture – legs bent, back straight.

Working at height

The risks involved in working at height must always be assessed.

Unless you are protected by a guard-rail system, fall arrest device, or safety net, you should not work where you can fall 2m (6' 6") or more. Additionally, if you are working over the side of a ship or barge or outside the guard-rail system and over water, both fall protection and a personal flotation device must be worn. The document *GR-HSE-015, Working at Height Procedure* gives guidance on working and on rescue plans and drills.

A PTW is required before you can work where you could fall more than 2m and there is no fall protection. The permit must state how you will be rescued if you fall. Be especially careful when climbing a ladder to reach the work area before your fall arrest device is clipped on and secured. If you are using a ladder, make sure it is properly secured or that a workmate is holding it in place.

List of key HSE and security documentation and procedures

The list below contains the principal instructions and procedures relevant to HSE and security management with which you must become familiar in Acergy. All of them are in common use across the group. (There are others, but these are the ones most likely to affect you directly.)

- ➜ Group HSE Management Instructions *(GR-HSE-001)*
- ➜ Hazard identification and risk assessment procedure *(GR-HSE-002)*
- ➜ Management of change to worktasks guideline *(GR-HSE-003)*
- ➜ Permit to work procedure *(GR-HSE-006)*
- ➜ Undesired events reporting procedure *(GR-HSE-007)*
- ➜ Safety observation guideline *(GR-HSE-009)*
- ➜ Guidance for using hazardous substances *(GR-HSE-010)*
- ➜ Confined space entry procedure *(GR-HSE-014)*
- ➜ Working at height procedure *(GR-HSE-015)*
- ➜ Guideline regarding personal health and security for travelling or working in West Africa *(GR-HSE-017)*
- ➜ Group environmental management guidelines *(GR-HSE-018)*
- ➜ Operations instruction *(GR-OPS-001)*
- ➜ Barge and ship HSE practice *(GR-OPS-005)*
- ➜ Instructions for lifting equipment and operations on barges, ships and yards *(GR-OPS-008)*

Your supervisor or manager will help you access them. They are all available electronically on our intranet but you may also have access to paper copies at your worksite. Your supervisor will also tell you about the additional procedures or rules that you must follow, including emergency procedures and housekeeping and environmental rules that are specific to your job or worksite.

Some useful prompts when assessing hazards

- ➜ Slip/trip/fall hazards
- ➜ Working at height/over the side
- ➜ Moving parts of machinery/vehicles
- ➜ Crane operations
- ➜ Moving/swinging objects
- ➜ Unstable objects
- ➜ Weather conditions
- ➜ Chemicals/pollution/contaminants
- ➜ Dust/airborne particles
- ➜ Low oxygen/toxic environment
- ➜ Fumes/noxious gases
- ➜ Pressure/vacuum
- ➜ Low/high temperature
- ➜ Flammable materials
- ➜ Explosives
- ➜ Radiation
- ➜ Electricity
- ➜ Vibration
- ➜ Tasks with RSI potential
- ➜ Manual handling
- ➜ Posture
- ➜ Positions of people (above/below/near)
- ➜ Restricted access
- ➜ Weak structures
- ➜ Noise
- ➜ Lighting levels
- ➜ Ejection of material (welding/grinding)
- ➜ Hydrocarbons

You can add others that you feel are appropriate to your work in the space below.

Some useful prompts when conducting a toolbox talk

- ➜ Overview of the work to be done.
- ➜ Details of individual activities comprising the overall task.
- ➜ People involved in the task and their individual responsibilities.
- ➜ Equipment being used and additional PPE required.
- ➜ Are PTW and/or isolation certificates needed?
- ➜ What simultaneous activities may be affected by or have an effect on the task?
- ➜ What hazards have been identified with the work?
- ➜ What precautionary measures are to be taken to minimise the risks?
- ➜ If dangerous substances/chemicals are involved, what precautions need to be taken?
- ➜ Effect of weather conditions on how the work is to be carried out.
- ➜ Recovery or contingency procedures to be used if things don't go as expected.
- ➜ Does everybody involved understand all the above points?

There may be other common topics that are specific to your job.
You can use the space below to make a note of them.

Personal HSE and security commitment

The group has set an HSE and security action plan (see *GR-HSE-012 Group HSE Action Plan*). This is regularly updated to reflect changes to our operating processes as well as feedback from the various barges, ships and other worksites, which shows how we can continuously improve. This plan will cascade down through regional and group operations plans and to individual worksite plans.

You can contribute too, by setting down your own personal commitment to help improve HSE performance at your work place.

Please use the space below to write out five key actions that you can and will take to contribute to HSE and security excellence at your site. (Your supervisor can give you guidance if required.) For example, if you are a newcomer, you may commit to learning and implementing the group procedures listed previously. Alternatively, you and your colleagues may all set targets associated with improving the number of safety observations you make collectively.

At Acergy, we support personal commitment in the belief that all injuries can be prevented and that through risk assessment, observation and a positive attitude, we can protect our people and the environment and prevent damage and loss to company property. At Acergy it is a condition of employment and every person's responsibility to work safely.

1. .....

2. .....

3. .....

4. .....

5. .....

HSE and security training undertaken

Make a list of the HSE and security related training that you have undertaken here. This can include specific yard, barge or ship safety inductions as well as presentations on specific group HSE and security or OPS procedures.

Date	Subject

HSE and security achievements and recognition

Make a list of what you consider to be your HSE and security achievements, awards or exceptional contributions and have your supervisor sign off as verification of each entry.

Date	Subject

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Safety observation card

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- ☐ Unsafe act
- ☐ Unsafe condition
- ☐ Unsafe procedure
- ☐ Safer act
- ☐ Safer condition
- ☐ Good practice procedure

Observation:

Immediate action taken (for unsafe situations):

Recommendation from your observation:

Name (optional): Date:

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Safety observation guidance

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Unsafe act	A breach of safety rules, not following procedures, careless behaviour.
Unsafe condition	Exposed to a hazard/inadequate protection.
Unsafe procedure	Procedure not covering all safety critical elements of the work activity.
Safer act	A change of behaviour which decreased the risks.
Safer condition	How equipment was modified, worksite layout changed, storage of material revised etc. which decreased the risks.
Safer procedure	A new procedure/process/instruction that covered safety critical issues and significantly contributed to reducing risks.

- The safety observation card has been designed to serve a dual purpose:
  a) as a proactive system, whereby with your help we can stop undesired events from taking place and leading to harm such as injury or damage.
  b) to give details of any very positive safe act/good practice procedure witnessed by the observer whereby he/she is impressed with the safety performance of the individual(s).
- To perform a safety observation: pause, observe and consider whether the act/condition/procedure is safe/unsafe. Stop any unsafe situation, then report your observation on the card.
- Adding your name to the card is optional.
- Give the completed card to your supervisor or safety advisor at the site.

Thank you for your participation

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Preventing slips and trips

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Hazard	Suggested action
Spillage of wet or dry substances	Clean spills immediately, ensure that a suitable cleaning agent is used. (Refer to chemical datasheets.)
Slippery surfaces	If the floor is slippery (or after cleaning, is likely to be wet for some time) provide signs warning people of the hazard or redirect passage via alternative routes.
Change from wet to dry floor surfaces	Warn of hazard by using signs. Place doormats next to wet area on dry side to reduce incidence of leaving wet footmarks.
Rugs/mats	Ensure mats are securely fixed and do not have curling edges. Replace mats if significantly contaminated by oil or grease.
Trailing cables	Position cables such that they avoid crossing walkways if possible. Use signs to warn people of loose cables; restrict access to minimise traffic over them.
Steps or changes of level	Ensure good levels of lighting to ensure steps or changes in level are not in shadow. Fit highly visible edge markings.
Stairways	Ensure good levels of step visibility; use tread markings at start point as a minimum. Remind people to use the handrails at all times when ascending or descending stairs.
Lighting levels	Ensure lighting levels are adequate in walkways and working areas so that potential trip hazards are not in shadow.
Protrusions	Clearly identify protrusions on deck or in walkways by highlighting them in a bright yellow paint.
Miscellaneous rubbish	Remove rubbish, put it in designated waste containers and prevent any build up within the normal working areas.

Manual handling

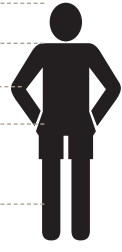
Refer to your HSE and security handbook for basic rules concerning manual handling.

1. Can you avoid the need to manually handle the item?
2. Can you reduce the risk of injury by using mechanical aids or two man lifts etc?
3. Have you considered all the hazards and risks associated with the handling task?

Here are some guidelines for maximum loads when lifting and lowering manually.

Women	Outstretched	Close to body
Full height	3kg	7kg
Shoulder height	7kg	13kg
Elbow height	10kg	16kg
Knuckle height	7kg	13kg
Mid/lower leg	3kg	7kg

Men	Outstretched	Close to body
Full height	5kg	10kg
Shoulder height	10kg	20kg
Elbow height	15kg	25kg
Knuckle height	10kg	20kg
Mid/lower leg	5kg	10kg



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Risk assessment

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Hazard severity outcome			Probability				
Injury	Spill/pollution	Damage/loss of production	Very unlikely	Unlikely	Possible	Likely	Very likely
Very serious Death or multiple serious long-term injuries	> 100m³	US $ > 1 million	M	M	H	H	H
Serious Day away from work case injury (DAFWC)	100ltr – 100m³	US $ 50,000 – 1 million	L	M	M	H	H
Moderate Restricted work case injury (RWC)	10 – 100ltr	US $ 10,000 – 50,000	L	L	M	M	H
Slight Medical treatment case injury (MTC)	1 – 10ltr	US $ < 10,000	L	L	L	M	M
Negligible First aid case or no specific treatment	< 1ltr	No cost	L	L	L	L	M

Risk criteria

L = Low risk	No further immediate controls are required. Proceed with care.
M = Medium risk	Activity must be investigated with a view to reducing risk further. Task can only proceed with the appropriate management authorisation after consultation with the specialist personnel.
H = Unacceptable risk	Task must not be undertaken. It requires immediate action to avoid the hazard or substantially reduce the risk by further/better control measures.

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Risk assessment

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Probability guidelines

It is appreciated that probability of occurrence is fairly subjective and open to personal interpretation. In an attempt to achieve a level of consistency the following definitions are applied.

1. **Very unlikely.** A freak combination of factors would be required for an accident to result.
2. **Unlikely.** A rare combination of factors would be required for an accident to result.
3. **Possible.** Could happen when additional factors are present but otherwise is unlikely to occur.
4. **Likely.** Not certain to happen but an additional factor may result in an accident.
5. **Very likely.** Almost inevitable that an incident would result.

Hazard identification

Here is a list of some hazards to act as a prompt.

1. Slip/trip/fall hazards
2. Chemicals/pollution/contaminants
3. Moving parts of machinery/vehicles
4. Pressure/vacuum
5. Working at height/over side
6. Dust
7. Position and entrapment
8. Lighting levels
9. Low oxygen environment
10. Restricted access/egress
11. Single point failures
12. Weak structures
13. Ship heave or roll
14. Crane operations
15. Vibration
16. Sparks/material from welding/grinding
17. Flammable materials
18. Moving/swinging objects
19. Voltage
20. Noise
21. Fumes/noxious gases
22. Manual handling
23. Low/high temperature
24. Radiation
25. Hydrocarbons
26. Posture
27. Unstable objects
28. Explosives
29. Weather conditions
30. Bacteria, virus, disease
31. Dangerous animals
32. Tasks with repetitive strain injury potential