



HS VEITUR'S HEALTH, SAFETY AND ENVIRONMENT REQUIREMENTS FOR CONTRACTORS

January 2017

Introduction

One of HS Veitur's goals is to make the company a safe and accident-free workplace where the safety of employees is at the fore. The same applies to work sites where work is carried out for HS Veitur by people not employed by the company.

These rules apply to contractors and their subcontractors who work for HS Veitur. We would like to draw attention to the fact that the company takes health, safety and environment requirements extremely seriously, and contractors are expected to comply with laws, rules and regulations on health, safety and environment issues, e.g. Icelandic Act no. 46/1980 on Workplace Facilities, Hygiene and Health and Safety, as amended, and Icelandic Regulation no. 920/2006 on the Organisation and Implementation of Health and Safety at Workplaces. You should also familiarise yourself with the requirements in the HS Veitur Safety Manual. The same applies to all other applicable Icelandic laws, rules and regulations that are not explicitly stated in this document but may in some way pertain to the project. Contractors must also take into account the requirements and recommendations set out by HS Veitur in this document, which may exceed the general requirements set by legislative and executive government authorities. The company's rules do not constitute an exhaustive list of the contractor's responsibilities and obligations, nor do they transfer responsibility for health and safety from the contractor to the company. Contractors are required to notify their employees and subcontractors of these requirements and recommendations.

General

HS Veitur, hereafter referred to as the Buyer, is responsible for preparing a health, safety and environment (HSE) plan and risk assessment, both at the preparatory stage and during the project implementation period, for work carried out on behalf of the Buyer. The Buyer's HSE plan is attached to the tender documents for the Contractor to use as reference when preparing the bid and their own HSE plan and risk assessment to use during the construction period. The Contractor is required to submit such a plan at the beginning of the project.

The Buyer will appoint a Project Supervisor, hereafter referred to as the PS, to supervise work at the site. The PS is responsible for communicating the Buyer's HSE requirements to the Contractor and following up on comments to the Buyer. If more than one contractor works on a project, the Buyer will appoint a health, safety and environment officer (HSEO), who will work with and under the supervision of the PS.

The Contractor must appoint health and safety wardens and health and safety representatives at the start of the project in accordance with Icelandic Regulation no. 920/2006 on the Organisation and Implementation of Health and Safety at Workplaces. Information on this, and the number of workers, must be submitted to the PS and the Icelandic Administration of Occupational Safety and Health. These workers, along with the Contractor's HSE representative, will act as contacts with the PS/HSEO on health and safety issues for the duration of the project. There are minimum requirements for the industrial/vocational education, or equivalent, of the Contractor's HSE representatives. For larger projects, a HSE committee must be established in accordance with applicable rules.

It must be ensured that all of the Contractor's workers have received appropriate health and safety training prior to commencing work at the work site and that the Contractor can demonstrate to the PS that such training has taken place. Foremen are required to review HSE issues at a brief meeting with workers at the start of the project, or when changes are made to the project, to ensure that everyone is aware of HSE issues. These meetings must be held at least monthly, and more frequently if necessary.

All workers on the work site are required to comply with the applicable emergency response plan. When necessary, the HSEO should review the emergency response plan and coordinate the Contractor's on-site emergency response plans, e.g. when new contractors begin working on site.



The Buyer will hold environment courses for the Contractor's employees and subcontractors, where environmental issues and their importance on the work site will be presented. Contractors and subcontractors are required to send all workers involved in the project on such courses. The courses will be paid for by the Buyer, however the Contractor will bear the cost of the working hours spent by workers on the course, approximately 3 hours. The Buyer will provide the Contractor with further information on the arrangement of the environment course at the start of the project or during project agreement negotiations.

There are penalties for repeated and/or deliberate violations of health, safety and environment regulations pursuant to the rules set out in the Hitaveita Suðurnesja hf. safety manual. Violations may lead to dismissal after three written warnings from the PS. Serious violations may lead to immediate dismissal.

The Buyer also reserves the right to postpone payments to the Contractor until the relevant health and safety issues have been remedied. The Buyer may terminate the project agreement if the Contractor does not respond to warnings.

Contractors must notify potentially dangerous events to the PS/HSEO and implement measures to prevent personal injury and property damage. All accidents must be reported to a line manager, and processed and recorded as soon as possible, regardless of their severity. The Contractor must maintain records of all accidents, hazardous events and damage to machinery and equipment, and submit them to the PS/HSEO. Occupational injuries must be investigated and immediate measures taken to prevent them from recurring. Serious accidents must be reported to the police and the Icelandic Occupational Health and Safety Authority as soon as possible, and in all cases no later than 24 hours after the accident, cf. the relevant provision. In the event of an electrical accident, the Icelandic Consumer Agency must also be notified. In the event of an accidental pollution incident, health authorities must also be notified. The PS/HSEO must be notified immediately of all accidents subject to notification.

Smoking is prohibited in the Buyer's buildings and work sites except in designated smoking areas. All alcohol and drug use is also strictly prohibited in these areas. Anyone who is under the influence of alcohol or other intoxicants is prohibited from the Buyer's premises, vehicles and work sites.

Work sites should be demarcated and unauthorised traffic restricted to the extent possible. When work is carried out in or close to traffic, markings must conform with the work site signage rules set by the Icelandic Road and Coastal Administration, the relevant municipality or road owners, cf. Article 15 of [Icelandic Regulation no. 1127/2007](#) on Police Ordinances.

Visits by guests of Contractor or Buyer, as well as visits by tourist groups, must be organised according to the rules agreed by the Contractor and Buyer. As a general rule, guests must receive and wear personal protective equipment and must be accompanied by a responsible person during their visit. It is important that visits do not affect the progress of the work and do not jeopardise the health and safety of employees or visitors.

Health authority requirements regarding the installation of temporary work facilities, drainage, refuse and hazardous waste disposal and work site conduct must be followed. The Buyer's rules on conduct in water protection areas must also be followed, cf. [Icelandic Regulation no. 796/1999](#) on the Prevention of Water Pollution, as amended.

Personal protective equipment (PPE) requirements

The Contractor must ensure that workers always use appropriate and approved personal protective equipment (PPE) in accordance with the project's risk assessment. The Contractor must ensure that workers are trained in the use of PPE where risks cannot be prevented with other measures and where required by rules or regulations.

- Hearing protection. Hearing protection must always be used in high-noise areas (cf. Icelandic Administration of Occupational Safety and Health requirements).
- Workwear. Workers must wear clothing or safety vests that meet visibility requirements and, in appropriate cases, clothing that will protect the worker from fire and other accidents.
- Respiratory protection. Appropriate respiratory protection must be used when working with solvents and other chemicals that may release hazardous vapours. Respiratory protection should also be used where there is a risk of dust pollution, e.g. in tunnels. Particular care should be taken when working near confined spaces and where there is a risk of the presence of geothermal gases such as hydrogen sulphide and carbon dioxide.



- Safety straps and lifelines. Approved fall protection equipment must be used where there is a risk of falling (at heights above 1.8 metres) and other fall protection is not possible.
- Eye and face protection. Safety glasses and face protection must be used for work that carries a risk of eye injury or where machinery and equipment may release particles and chippings.
- Hard hats. Hard hats are required for all construction work.
- Protective shoes/safety boots. Employees must always wear protective shoes/safety boots during construction work.

First aid/rescue team requirements

There must always be workers present on site who have attended a first aid course and know how to respond to emergency situations. The Contractor must ensure that appropriate approved equipment such as a first-aid kit, fire blanket and eye bath is available and accessible to workers. Equipment for responding to urgent environmental accidents must also be available.

At work sites further than a 20-minute drive to the nearest hospital or healthcare centre, the Contractor must expect to be required to provide care facilities for treating minor injuries.

The Contractor must appoint a defined group of workers who are able to respond to emergency events. Members of this emergency team must have received training in accident response and fire prevention.

Tender specifications will explicitly state if such care facilities and/or an emergency team is required.

The emergency number 112 should be dialled in the event of an emergency event or accident. In such cases, the following order of priority should be followed:

- Assess the risk
- Ensure safety at the site
- Provide emergency first aid
- Report the event
- Provide general first aid

The person speaking to the emergency services must speak calmly and clearly, provide an exact location, their name and telephone number, a description of the incident, and the number and condition of those injured.

Requirements for fire protection and conduct on site

At the start of the project, contractors working in or around the Buyer's structures must familiarise themselves with the evacuation routes and assembly points of the structure/area. Contractors must provide statutory firefighting equipment and maintain this equipment according to applicable rules.

A fire alarm or siren should be sounded to signal evacuation due to a fire or other danger. The Contractor's workers must then immediately evacuate the structure or site. After the evacuation, the Contractor's health and safety warden must contact the PS/HSE0, who will then determine the next steps in consultation with the Contractor.

The work site must be neat and orderly. Combustible materials may not be kept within 12 metres of buildings. Larger quantities must be kept further away. Refuse and combustible materials that are not in use must be removed from the work site. Materials required for work on site must be located so that the fire brigade and other emergency services can move freely around the area.

Extreme caution should be exercised when using and handling flammable liquids and gases. These must only be used in accordance with applicable safety instructions. These materials should be stored in a secure location when not in use. The burning of any materials on the construction site is prohibited.

Particular attention should be paid to the location of lighting equipment and care should be taken to ensure that it does not cause overheating and combustion. In areas where there is a high concentration of dust, shavings, etc., lights must have safety glass to protect the bulb. The person in charge of the Buyer's premises must be consulted before welding work begins. All combustible materials must be removed in areas where welding is being carried out. Flammable objects that cannot be removed must be protected. It must be ensured that there is no risk of combustion after welding is completed. The welding location must be monitored for one



hour after welding has been completed. Gas cylinders and oxygen tanks must be handled with the utmost caution. All cylinders and tanks must have the required safety equipment, e.g. check valves and flashback arrestors. Weld shafts must also have check valves. Cylinders and tanks in use must be securely fastened to purpose-made trolleys or so they cannot tip over. Reserve supplies must be stored securely away from the work site.

Fire extinguishers should be provided and easily accessible where there is a fire hazard. A fire extinguisher should preferably be located within 25 metres of the work site. The type of fire extinguisher should be determined by the work and materials present at each site, and they should be sufficient in number to provide adequate extinguishing value for the fire load that exists in each area.

Requirements for electrical work

Electrical work must comply with the requirements of the Iceland Construction Authority, as set out in [Icelandic Regulation no. 678/2009](#) on Electrical Installations, as amended.

In events requiring employees or equipment to enter the restricted area of an electrical installation, the Contractor must submit a risk assessment and health and safety rules, along with a written authorisation from the party responsible for the electrical equipment. Care must always be taken when working in proximity to live parts or parts that may be live. A qualified electrician must certify all work on electrical equipment. Electrical contractors must work in compliance with a certified safety management system.

Requirements for welding

Welding, e.g. when connecting or repairing district heating pipes, takes place in varying conditions. Adequate ventilation must be ensured and attention paid to the surroundings, particularly indoors, due to potential fire hazards. Pipes must be drained before starting repair work. Confined spaces should not be entered without checking whether sufficient oxygen is present. If work is carried out at the Buyer's power station sites, the foreman or on-duty mechanical engineers must be consulted before starting work.

Requirements for work with hot water

Special care should be taken when working close to hot water pipes and/or steam. Employees must wear rubber boots and arm-length gloves where there is a risk of burns from hot water/steam.

Checks should be made to ensure that hot water has not accumulated in the bottom of wells or other depressions before starting work. Hot water should be channelled into a drain when pumping from wells. The site should not be abandoned if unprotected hot water is running.

Wells are considered to be confined spaces. Rules on work in confined spaces must be followed before entering wells. See Paragraph 11.

Requirements for work at height

Work at height is not restricted to places high above the ground. Work underground may also fall into this category, including work in wells, ditches and pits. Fall protection should be used whenever:

- There is a risk of employees falling and injuring themselves.
- Work is being carried out outside of areas surrounded by handrails.
- An employee believes that such protection is necessary.

Fall protection includes but is not limited to:

- Scaffolding.
- Secure handrails.
- PPE or an appropriate safety belt to prevent falling.

Hoisting requirements

Slings, chains, crane wires, locks and cranes/hoists must have a quality certification and their strength must be appropriate for the weight of the load to be hoisted. Slings and chains must be in perfect condition. The location of other workers should be carefully observed when hoisting. Loads should never be hoisted above workers and the hoist operator must be located at a safe distance. The hoisting equipment must be in perfect



working order and the Contractor is responsible for its regular inspection. No load must ever be left hanging from a crane. The Contractor bears responsibility for keeping the levelling feet in proper order and for their correct use, including placing them on an appropriate base.

Before hoisting extremely heavy objects, such as mechanical equipment or large transformers, an approved risk assessment must have been carried out that specifies precautionary measures, the choice of hoisting equipment and manner of executing the lift. Requirements for work in confined spaces Contractors must present their working procedures and submit a risk assessment before their workers will be allowed into the confined space. All possible health and safety measures must be applied when carrying out such work, e.g. enclosed spaces must be ventilated with blowers and air quality measured. Purification of inlet air into the enclosed space must also be ensured and escape routes from the space must be provided for emergencies. All work in confined spaces must be carried out in accordance with the applicable rules set by the Icelandic Administration of Occupational Safety and Health.

Requirements regarding the handling and use of hazardous chemicals.

Efforts should be made to keep the use of toxic and hazardous chemicals to a minimum. Contractors must inform the PS of the toxic and hazardous chemicals they intend to use and strive to use the least hazardous chemicals possible. A risk assessment must be carried out before starting work involving such chemicals. In projects carried out on behalf of the Buyer, toxic and hazardous chemicals prohibited by Icelandic Act no. 45/2008 on Chemicals and Preparations may not be used.

Working procedures must be provided for all toxic and hazardous chemicals used on the project. The working procedures must be in Icelandic but also understandable for employees who do not understand Icelandic. They must be accessible at the site where the chemicals are used. Procedures and the use of PEE must be in accordance with the information in the working procedures. The Contractor must ensure that employees are informed of the potential hazards of using chemicals.

All toxic and hazardous chemicals must be kept in closed containers. See also the handling of oil and hazardous chemicals in Section 14.

Requirements for vehicles and machinery

The Contractor is responsible for all of its equipment, machinery and tools, and must ensure that they are kept in a condition that complies with applicable laws and regulations. The Contractor must submit inspection certificates for heavy machinery and insurance certificates if requested.

Operators of vehicles and machinery must have the appropriate qualifications. The Contractor must be able to demonstrate upon request that workers have the required qualifications. The utmost care should be taken when operating machinery. Operators should preferably be guided by an assistant when reversing heavy machinery or ensure that no one is standing behind them. The Contractor is responsible for the operability of the equipment's controls and safety gear, and ensuring that loads are secured.

It is important that all machinery is in good working order with no leaking of hydraulic fluid or oil. Machinery that is not in such a condition will be excluded from the project without notice. In order to prevent the risk of environmental accidents caused by machinery and/or storage of hazardous chemicals, the Contractor, in consultation with the HSEO or an inspector, must delineate an area to be laid with dense geotextile connected to an oil separator. All maintenance of machinery, e.g. oil changes, must be carried out in this area. The loading and unloading of hazardous chemicals, such as oils and related substances, and the storage of hazardous chemicals that cannot be kept in indoor storage area must also take place in this area.

In order to ensure safety, vehicles or machinery must generally be left as prescribed in the rules when workers go on a break or leave at the end of the work day. Idling of machinery should be kept to a minimum and machinery should be left so that unauthorised persons cannot start or move the machine in question. Forklifts should be left with their forks in the lowest position. It is forbidden to transport passengers in vehicles or machinery not equipped with a seat intended for passengers.

All machinery must be equipped with lights and other necessary equipment for driving in traffic.

It is strictly forbidden to lift people using equipment not authorised this purpose by the Icelandic Administration of Occupational Safety and Health.



Requirements for work on and close to carriageways

Prior to commencing construction work near roads or carriageways, the Contractor must notify and obtain permission from the relevant municipality, an Icelandic Road and Coastal Administration representative and police authorities. The requirements of Article 15 of Icelandic Regulation no. 1127/2007 on Police Ordinances regarding signage at work sites must be fulfilled in consultation with police authorities.

Prior to commencing construction, the Contractor must familiarise themselves with documentation on the position of electrical cables and utilities. The PS/HSEO must be notified immediately of any damage or wear to cables or utilities. Serious accidents must be reported immediately to the emergency number 112.

For work on road lighting outside urban areas, the work site must be marked with the appropriate signage to warn road users. Other signage requirements can be found in the rules on work site signage on the Icelandic Road and Coastal Administration's website.

Requirements for work in ditches

In general, ditches and other excavations should be demarcated with flags. Ditches and ditch edges should be finished so that there is no risk to passers-by or employees. In loose soil, the ditch profile should be such that there is no risk of soil sliding into the ditch. Care should also be taken to prevent surface water from accumulating in ditches.

In other respects, reference is made to the guidelines on [worker safety no. 2/1990](#) regarding the digging of ditches and pits.

As a rule, work must be arranged so that it is completed as quickly as possible and with minimum disturbance to residents in the vicinity and other passers-by. The Contractor must maintain hazard markings for the duration of the project. It is important to remove hazard markings as soon as they are no longer required. If there is an unreasonable delay in construction that is attributable to the actions or lack of action by parties other than the Contractor, and which leads to increased costs of maintaining hazard markings for the Contractor, the Contractor can claim compensation. Other signage requirements can be found in the rules on work site signage on the Icelandic Road and Coastal Administration's website.

Requirements for finishing of work sites.

Upon completion of the project, the project area must be finished in a tidy manner according to the requirements set out in the tender documents and project agreement. All materials used for the project must be removed and work sites should be finished so that there is no risk of accidents, in accordance with the provisions of the tender documents.