

Dokumenttyp Presentationsmaterial - VO	Dokumentstatus Frisläppt	Statusdatum 2019-12-10	Dokument-ID/Version 1701177 / 20.0
Intern dokumentägare NS	Sekretessklass Öppen	Gäller t o m	Alt. dokument-ID 1
PSG / FSG enl dok.nr /	Ersätter		Alt. dokument-ID 2
Handläggare Boson Peter GN-SST	Granskat av Norrman Anders (annr) GN-U Andersson Sven-Anders (snan) GN-D	Godkänt av Karlsson Carina GN-S	Frisläppt av Karlsson Carina GN-S

Safety regulations at Ringhals

SUMMARY

The document “Safety regulations at Ringhals” is a comprehensive summary and information of the general rules and routines that shall be followed by all workers at Ringhals.

Except for the directions in applicable Swedish laws, regulations and issued instructions, all personnel shall also follow applicable internal directives and instructions.

The operation manager and the work management for the contractors are responsible for taking necessary actions if subordinated personnel fail to follow the safety and protection rules at Ringhals.

Consulted companies are obliged to follow the rules established by the purchaser. If companies or their employees break any of the established directions, this is considered to be a violation of agreement.

Upon consulting contractors or other personnel, the responsible Ringhals requisitor shall assure that the contractors’ personnel possess appropriate training and skills and if needed ensure that complementary training is conducted.

This is a translation of the Swedish edition 931209027/27.0

Delgivning och distribution

Delgivning för åtgärd: NBZ, NKK.

Delgivning för kännedom: Tillträdesansvariga, NB,ND, NH, NK, NQ, NR, NS, NT, NU, ND1, ND2, ND3, ND4, NDC, NDM, NSA, NSB, NSF, NSM, NSS, NUB, NUE, NUI, NUM, NUP, NUQ, NUT, Skyddspärmsystemet (HEBA), Berörda FOH.

Distribution:

TABLE OF CONTENTS

1	RESPONSIBILITY	6
1.1	Work environment responsibility	6
2	ALARM, EVACUATION AND FIRST AID	6
2.1	Accidents and first aid equipment	6
2.2	Alarm numbers	7
2.3	Alarm signals.....	7
2.4	Assembly points.....	7
2.5	Familiarity with the site.....	7
3	GENERAL RULES.....	8
3.1	Alcohol and drugs.....	8
3.2	Smoking.....	8
3.3	House keeping.....	8
3.4	Cleanliness in system and plant	9
3.5	The use of radio transmitters and mobile phones	9
3.6	The conformity to rules and consequences	9
4	EVALUATION OF RISKS	10
5	FAULT PREVENTING METHODS	10
5.1	Pre job briefing.....	10
6	REPORTING AND WORK EXPERIENCE FEEDBACK	10
6.1	Work related accidents and near accidents	10
6.2	Risk observations	11
6.3	Experience feedback leaflets.....	11
7	ENVIRONMENT	11
8	WORK ENVIRONMENT AND GENERAL PROTECTION RULES	12
8.1	Health, safety and environment (HSE).....	12
8.2	Personal protection equipment.....	12
8.3	Work in operation areas or work on/close to operational components.....	12
8.4	Environment technical safety permit	13
8.5	Work in confined premises.....	13
8.6	Narrow conductive areas	13
8.7	Registration report electrical contractor	13
8.8	Work in heat.....	13
8.9	Lifting	13
8.9.1	Contractors	14
8.10	Use of industrial truck.....	14
8.11	Danger of fall and falling objects	14
8.12	Routine for barriers.....	14
9	CHEMICAL PRODUCTS	14
9.1	Chemical register with Material safety data sheets	15
9.2	Risk assessment of chemical products.....	15
9.3	Storage of chemical products	15

9.4	Safety work permit	15
9.5	Introduction of new chemical products.	15
10	WORK EQUIPMENT	16
10.1	Electrical material.....	16
10.2	Hoses and junctions	16
10.3	Ladders	17
10.4	Scaffoldings, rails and beams	17
11	WASTE AND RECYCLING	17
11.1	Hazardous waste	17
12	HAZARDOUS GOODS INCL. RADIOACTIVE MATERIAL	18
12.1	Arrival.....	18
12.2	Transport within Ringhals industrial area	18
12.3	Shipping.....	18
13	FIRE PROTECTION	18
13.1	Fire technical protection permit	19
13.2	Explosive classified areas	19
13.3	Inflammable liquids	19
13.4	Gas cylinders.....	19
13.5	Fire doors.....	19
13.6	Emergency exits and markings for emergency evacuation	19
13.7	Fire-load density.....	20
14	PREVENTIVE RADIATION PROTECTION MEASURES	20
14.1	Medical classifications.....	20
14.1.1	Medical classification conducted in Sweden	20
14.1.2	Medical classification conducted in other country than Sweden	22
14.2	Dose reports before work in Ringhals controlled areas	22
14.2.1	Swedish citizens	23
14.2.2	Other EU citizens	23
14.2.3	Citizens of countries outside the EU	23
14.3	Dose limits	24
14.3.1	Pregnant women	24
14.4	Ringhals internal dose restriction for individual dose	24
14.5	Ringhals internal dose restriction for women	25
14.6	Dose reducing measures in work planning.....	25
14.7	Radiological work permit.....	26
14.8	Personal protection equipment and dosimeters	26
14.9	Radiography	27
14.10	Barriers and signs	27
14.11	Prohibition of eating etc in radiological controlled areas	27
14.12	Open wounds.....	27
14.13	Contamination checks	28
14.14	Medical treatment with radioactivity	28
15	SECURITY AND ACCESS.....	28
15.1	Access	29
15.2	Vehicles.....	30
15.3	Safety control	31

15.4	Surveillance	31
15.5	Interior surveillance	31
15.6	Measures in order to prevent theft.....	32
16	INFORMATION SECURITY	33
16.1	Compilation of Ringhals security classification	35

APPENDIX

- 1. General demands for admission to Ringhals
- 2. Training

CONNECTED APPENDIX

- 3. Technical marking of chemical products

REGISTERED REVICES			
Version No	Revised pages	Reason	Administrator / Released by
18.0		See version 18.0	B Danielsson/ E Halldén
19.0	Several Page 1 Page 1 Page 6 Page 6 Page 7 Page 9 Page 12 Page 12 Page 13 Page 13 Page 14 Page 16 Page 17 Page 20 Appendix 1 Appendix 2	Minor editorial amendments. The document type is changed from Instruction to Presentation material. SUMMARY Clarified that the document constitutes an overall information about the rules at Ringhals. Chapter 1.1 Supplemented the text about the long-term work environment responsibility for external personnel. Chapter 1.2 Supplemented the text with the employers liability to verify that their staff comply with rules and procedures. Chapter 2.1 c. Chapter 3.1 New text about drug test for contactors. Chapter 6.1 Supplemented text about electrical accidents. Chapter 7 New chapter, Environment. Chapter 8.1 New chapter, Health, safety and environment (HSE). Chapter 8.2 Supplemented text about personal protection equipment in electrical rooms and outdoors. Chapter 8.6 A new access training, Work in room including operable equipment. Chapter 8.14 Amended text about open shaft. Chapter 9.2 Amended text about introduction of new chemical products. Chapter 13.1 Supplemented requirements for fire technical permit. Appendix 1 New text about drug test for contactors. Only a copy of the result from the drug test is necessary. Appendix 2 Revised	B Danielsson/ B Linde
20.0	Page 1 Page 6 Page 9 Page 13 Appendix 2 Page 34	Adjusted the distribution list Chapter 1 New text about responsibility Chapter 3.5 New text about radio transmitters and mobile phones Chapter 8.3, 8.4, 8.5 Removed Appendix 2 Revised Chapter 3.1 - Additional substances for drug testing are benzodiazepines Chapter 16 Added a new security classification	

1 RESPONSIBILITY

1.1 Work environment responsibility

Local safety regulations are applied to Ringhals so as to minimise the risks for accidents and equipment and the possibility of personal injury and damage to the station.

The law regarding working conditions states that employers shall be responsible for the working conditions of their employees. This means that employers are required to ensure that the working conditions of their employees are made as safe as possible. Employers must therefore take all the necessary precautions to prevent accidents and generally protect the health of their employees.

Ringhals is responsible for consulting with contractors who are contracted to jointly undertake work in the same area to ensure cooperation regarding working conditions.

The responsibility rests with all contractors to take the action necessary to avoid the risk of injury to any of the personnel in the work area. Contractors are also directly responsible for the safety of their own employees. The respective contractors are also responsible for the safety equipment being used by their employees unless alternative arrangements have been made.

Every employed has a personal responsibility for health and safety in the daily work. In purpose to create such a good environment as possible, each employee is obliged to know and follow Ringhals' rules and routines as well as the specific requirements that are included with certain assignments.

2 ALARM, EVACUATION AND FIRST AID

2.1 Accidents and first aid equipment

First-aid kits are to be found in the vicinity of every stairwell and in the Health and Safety offices.

There are several defibrillators at Ringhals. The location is marked on the site area map. Defibrillator is also included in the equipment for Ringhals internal rescue team.

In case of emergency there are persons trained in first aid at the maintenance-, operational- and health and safety departments.

The internal rescue team at Ringhals are available around the clock and are well educated in taking care of injured persons and should always be called to the scene of an accident.

During office hours the industrial health service is manned with nursing staff. The nursing staff is always called out to the scene of the accident.

2.2 Alarm numbers

From internal telephone (as well as Vattenfall internal mobile phones) call: 3333 (Ringhals security centre).

From external mobile phone, call 112. The alarm will be connected to the county alarm centre in Halmstad.

2.3 Alarm signals

Immediate danger

0,5 second pulsing sound in up to 60 seconds.

Triggered when evacuation is required. Proceed immediately to the nearest assembly point. Wait for further information via the speaker system.

Important message

— — — — —

Signal 7 seconds with 14 seconds pause.

Triggered as emergency alarm. Go indoors, proceed to assembly point and await further information via radio or the speaker system.

Emergency over

Prolonged signal, about 30 seconds.

All personnel are required to inform themselves about the alarm signals that exist within the area. Signs showing current alarm types are posted at several locations in the plant, for instance on signboards, in personnel locks and in elevators.

2.4 Assembly points

At alarm signal “Immediate danger” and “Important message” the personnel gather at the assembly points. Ringhals assembly points are:

- 1P Entrance
- 2P Canteen
- 4P Canteen Forellen
- RG 25 Canteen Kantarellen
- RG22 Workshop building
- RG54 The gymnasium – Ringhallen
- RG82 Videbergsborg 2

2.5 Familiarity with the site

The work management or the purchaser’s responsible for access, is responsible to make sure that own and hired staff are familiar with the working site, the alarm system, evacuation routes and assembly points. Prior to access to the reactor containment, all staff should also be familiar with how the personnel locks work.

3 GENERAL RULES

3.1 Alcohol and drugs

Ringhals shall be kept free from drugs and in our drug preventive programme it is stipulated how this is to be achieved.

It is forbidden to be under the influence of alcoholic beverages or drugs whilst at work or to bring alcoholic beverages or drugs into Ringhals. An individual who does not respect these rules will be dismissed immediately from Ringhals. Drug tests can also be required if there is reasonable suspicion.

Approved drug control is required for work at Ringhals amphetamines, cannabinoids, opiates, benzodiazepines (new substance) and cocaine for all staff from day one. For work only in the industrial area valid for a maximum of five days without valid drug test. The validity period for drug tests is three years.

All personnel who are entitled to access the IS/IT environment within Ringhals, must have passed the drug test corresponding to access to the plant, i.e. from the first day.

Drug tests for Ringhals' employees are carried out at the industrial health service upon hiring, randomly and on suspicion. If the drug test shows a positive result the employee will be taken care of according to the rules at Ringhals.

Contractors/consultants

The contractor or consultant must send a copy of the drug test, without remarks, to Access service at Ringhals well ahead prior to his/her arrival at Ringhals. The result from drug test have to be stamped by performing medical facility. The drug test for contractors is on the contracting company's expense.

As for contractor personnel, the power plant will conduct random tests in order to check that the tests have been conducted in a correct manner.

In addition, random alcohol and drug tests are also carried out at the power plants for all personnel.

- If an alcohol test is positive, the person must immediately leave Ringhals
- If a randomly conducted drug test of a contractor is positive, at least two years should pass before new access may be tried. The person is during that time suspended from Ringhals.

3.2 Smoking

There is a **smoking prohibition** indoors and outdoors at Ringhals. Smoking is only allowed on assigned locations.

3.3 House keeping

In order not to increase the risk for accidents and jeopardize the operation and reactor safety, the worker is responsible for keeping good order at the working site.

Electricity cables, hoses and similar should be located so that they are not damaged, don't cause accidents and prevent evacuation.

3.4 **Cleanliness in system and plant**

There is a training requirement, please see appendix 2 – Clean system.

Objects and dirt in the systems have great importance on for instance the radiation dose to the personnel, component functions as well as fuel damages. In order to prevent spreading of impurities, they should be taken care of at the generation source.

Personnel working in the plant should be familiar with the existing cleanliness demands. There are separate cleanliness demands for components, depending on what system they are part of and if they are in contact with process water or not.

Clear plastic is not allowed in radiological controlled areas. Personal equipment like glasses, dosimeters, watches, etc are excepted from this general prohibition, except for within indicated cleanliness areas.

For use of chemicals, Ringhals technical marking should be followed [please refer to appendix 3 (connected)].

3.5 **The use of radio transmitters and mobile phones**

The use of radio transmitters and mobile phones is generally allowed at the site. Areas, where use of mobile phones and radio transmitters are not allowed, are marked with signs indicating this.

3.6 **The conformity to rules and consequences**

All managers and management for the consulted contractors and consultants have a responsibility to supervise and correct anyone who doesn't follow the protection rules established at Ringhals. It is also a personnel responsibility to support one's colleagues in following the rules.

In situations when single persons don't fulfil these requirements, a number of different labour legislation actions may be taken. The choice of consequence depends on the degree of misconduct and what degree of damage it causes Ringhals. An evaluation should also be made if completing training is required, for instance Safety and security training. If the misconduct is very severe or if it is a repeated event, an evaluation is made if there are reasons for the contracted person to terminate the assignment prematurely.

As for **Ringhals' own staff** there are guidelines for handling in an instruction in Ringhals Management System.

4 EVALUATION OF RISKS

The law demand an evaluation of risks prior to work commence. A fundamental rule is that all functions should be risk assessed but the requirements within different areas varies.

The person in charge of the function should make sure that risks are identified, evaluated, handled and documented. If something is changed in the function, when there are serious near accidents or accidents, the risk evaluation should be updated.

5 FAULT PREVENTING METHODS

There are training requirements, please see appendix 2 - Faul preventing methods.

For all functions with importance for personal and reactor safety, there are requirements on a fault preventing (pro-active) manner of work. Personnel working at Ringhals are responsible for working pro-actively with situations that may lead to accidents, disturbances and faults. As for the external environment, it is also important to prevent fault events that may lead to discharge or that may harm the environment. A support in this work is the fault preventive methods described in certain brochures, *Fault preventive methods*.

5.1 Pre job briefing

The process “pre job briefing” is implemented in order to decrease the risk of events that may affect reactor safety, personal safety and availability. The process means that a briefing is carried out with regards to how the work should be conducted along with the risks and threats that shall be avoided.

A “**post-job debrief**” is performed in order to benefit of the experiences after the performed work assignment.

6 REPORTING AND WORK EXPERIENCE FEEDBACK

6.1 Work related accidents and near accidents

Contractors shall immediately inform Ringhals in the event of an accident occurring or an accident being narrowly avoided. Contractors are also responsible for reporting the incident electronically in Avärs or as an alternative, submit a written report to your assigned contact person at Ringhals.

Near accidents include fault events that might have resulted in a damage of the plant, people or affecting the external environment.

If a person is exposed to an electrical accident should hospital be contacted for a check. All electrical accidents are classified as serious accidents. The victim should not drive yourself to the hospital.

Electrical near accidents and accidents shall be communicated to Ringhals electrical safety engineer.

6.2 Risk observations

A **risk observation** is observation of a risk that may lead to accident or near accident. Contractors are also responsible for reporting the risk observation electronically in Avärs or as an alternative, submit a written report to your assigned contact person at Ringhals.

6.3 Experience feedback leaflets

A part of continuous improving ourselves in our own function is to learn from own experiences. These are collected by the reporting made in Ringhals' system for deviations, experiences and issues (Avärs).

In addition to attending to the event as such, experiences are compiled and communicated among other ways via the experience feedback leaflets. These should be used at work planning, pre job briefing, etc.

Our learning depends on your participation and reporting.

7 ENVIRONMENT

Ringhals environmental impact describes as environmental aspects. From these aspects environmental targets are selected. Ringhals environmental goals are shown on [Ringhals external website](#).

Environmentally hazardous substances must not be poured into a sink, floor drain or stormwater well as they can contaminate the environment. At the risk that hazardous substances can reach floor drain or stormwater wells must be covered for preventive purposes.

How you should act in the event of a spill or leak see the chemical product protective sheet alternatively safety data sheet, SDS.

For storage of chemical products, see Chapter 9.2.

For waste management, see Chapter 11.

8 WORK ENVIRONMENT AND GENERAL PROTECTION RULES

The working environment law must be followed. Special rules for Ringhals are described below

8.1 Health, safety and environment (HSE)

Contractors shall be able to present a HSE-plan for Ringhals, which has the right to demand an improved plan if necessary before starting work.

8.2 Personal protection equipment

Personal protective equipment must be worn according to the signs in the plant. Helmet, goggles and safety shoes are often compulsory protection.

Full covering arc tested clothes from inside/out shall be used when working in electrical rooms (connections/electrical work).

Special protective clothing is needed within controlled area. See 14.8.

Changes of protective equipment occur in accordance to safety permit, signs or pre job briefing.

Protective clothing is provided by Ringhals when working in controlled areas but otherwise must be provided by the supplier.

8.3 Work in operation areas or work on/close to operational components

There is a training requirement, please see appendix 2 – Work in room including operable equipment.

The work in the plant should be conducted by a person assigned as work foreman/electrical work responsible. This person should have conducted a special training in the safety instructions.

The work may not be commenced until a work permit or a work authorization has been received from the operation supervisor/duty shift manager in each control room or Work Control Center.

Many work assignments also require a safety permit that is collected from the health physics office at the unit in question. The permits are required for the plant and personal safety and should be scrupulously followed. The permits should be assigned by the responsible work foreman/work responsible/electrical work responsible.

Here below is a list of permits:

- **Work permit:** If the work requires that components be taken out of operation.
- **Work authorization:** For situations where components do not need to be taken out of service or disconnected.

- **Safety permits:** Must always be obtained prior to work in radiological, fire technical or environment technical environments, (please see 8.4, 13.1 and 14.7).

8.4 Environment technical safety permit

The work management should at the planning of a work assignment consider if the work assignment's nature requires safety permit.

Examples of when an environment technical safety permit should be issued:

- Access to confined premises (vessels, tanks, draining-wells)
- Work in cooling water channels
- Use of hazardous chemical products, please see chapter 9
- Work in strong electromagnetic fields
- Work in systems including chemicals

8.5 Work in confined premises

Work in vessels, tunnels and other confined premises may constitute a risk for suffocation, poisoning and fire and may also entail problems upon evacuation and taking care of injured. Prior to access to confined premises, an environmental technical safety permit should be issued. There should always be a gatekeeper.

8.6 Narrow conductive areas

When work is conducted in narrow areas with electrical conductive surroundings (tanks of metal, condensers, etc) there are special requirements for the voltage feed for use of removable and hand held electrical equipment, for instance at most 50 volts AC to a hand lamp.

8.7 Registration report electrical contractor

Electrical contractors that are to be engaged to carry out or supervise electrical installation work of any kind on Ringhals' electricity plant, must forward information concerning the electrical installation company (name, address, phone number to) to a certificated electrical engineer at Ringhals along with information about the authorized installation engineer for the actual electrical installation assignment (name, address, phone number and copy of the authorization proof) along with a copy of the third party insurance.

8.8 Work in heat

Working in hot environments may constitute a risk for near accidents and accidents. The responsible work management is therefore responsible to evaluate this risk. The work shift's length should be adapted to the prevailing conditions. Upon work in a warm environment, special consideration should be taken to this upon planning of the work. Further information may be obtained from the Health and Safety office.

8.9 Lifting

There is a training requirement, please see appendix 2 – Lifting.

For lifting works, only approved and marked equipment may be used. Possible faults on the lifting equipment should immediately be reported to the supervisors.

Temporary lifting equipment, for instance lifting racks, shall be controlled and marked. Ringhals has internal instructions regulating this. The equipment shall in general be checked every year.

Personnel conducting lifts should have a valid authorisation to perform lifting at Ringhals. Ringhals internal instructions within this area should be followed. Information is given by the work management or the Ringhals admission responsible. The work management shall ensure that persons who work with lifting and lifting equipment have the right competence/ authorization.

8.9.1 Contractors

If contractors wish to use the purchasers lifting equipment, this should be carried out in accordance with Ringhals' lifting instruction.

If the contractor wishes to use their own lifting equipment, this should be reported to the responsible for lifting at Ringhals who will give further instructions. Lifting of persons with crane or overhead travelling crane, etc. is not allowed unless a special permission is granted by the responsible for lifting at Ringhals.

8.10 Use of industrial truck

The driver should prior to truck handling commence, have carried out related training.

Prior to truck work, the responsible Ringhals manager should issue a written drivers licence for industrial truck.

8.11 Danger of fall and falling objects

When there is a risk of falling objects, when you open to underlying levels and when working in and close by open shaft, shall the area be obstructed and warning signs shall be posted. The area underneath the opening shall be roped off and warning signs shall be posted before work starts.

At work on high altitudes, higher than two meters, fall protection equipment shall be used if not the risk for falling accident is estimated as low.

Everyone who use fall protection equipment must be trained for this.

8.12 Routine for barriers

In combination with the barrier, signs shall provide information of hazards, and who is responsible for the barrier .

9 CHEMICAL PRODUCTS

Chemical products include for example oil, tape, gaskets, coloured pencils and detergents.

All chemical products used and stored at the Ringhals site have to be approved and registered, in the chemical register iChemistry. Every chemical product is to be classified according to the nuclear industry joint marking system of technical marking [appendix 3, (connected)]. Unlabelled chemical products may not be used at Ringhals.

9.1 Chemical register with Material safety data sheets

Ringhals approved chemicals are included in a chemical register, that also covers protection information for each product. All computer users within Ringhals, has access to the register. As for contractors, each access responsible person makes sure that access to the register is granted.

9.2 Risk assessment of chemical products

Work assignments where chemical sources of risk may cause illness or accidents in the function, should be analysed and evaluated for all products and as often as the function requires. The risk assessments are mainly conducted in the chemical register iChemistry.

9.3 Storage of chemical products

All liquid chemical products should be stored embanked to avoid leakage to the environment. Inflammable chemical products should be stored in flammable goods cabinet. The user is responsible that unused chemicals is disposed according to applicable directions.

9.4 Safety work permit

Use of hazardous chemical products such as corrosive fluids or commence of work where toxic or explosive gases might occur must be regulated in a safety work permits. Chemical and environmental safety permits are received at the Health and Safety offices. Upon work in systems including chemicals, the work management shall consider if an environment technical safety permit is necessary.

9.5 Introduction of new chemical products.

Prior to application of procurement, it should always be investigated if

- the actual product is already registered in the chemical register
- another product with the same function is already registered in the chemical register.

In order to evaluate a new chemical product, you need to apply for a new product via the chemical register. Together with the application shall the safety data sheet of the product be appended and furthermore shall a sample of the product (ca 100 ml) be delivered. A complete application and possibly further information should be handed over to the environmental unit no later than five weeks prior to planned use.

Administrators at the environmental unit make an evaluation of each new chemical product according to the established requirement template prior to possible procurement.

10 WORK EQUIPMENT

10.1 Electrical material

The employer/supplier is the “possessor” of the electricity material used within the own unit and is responsible for keeping it in such a status and that it is used in such a way, that it provides necessary safety for persons and possessions.

Electrical material (exampel jointing cables, movable centrals, lighting and utility goods, electrical cleaning equipment, electrical vehicles) should be checked yearly and marked with the latest control date according to valid instructions.

All **contractors** are obliged to show that the electrical material in electrical aspect, fulfils the valid regulations and provisions befor used.

Control

A control conducted within a year prior to the use at Ringhals is considered to be valid.

All electrical material should be checked continuously so that it out of an electrical point of view, hasn’t been damaged. If damage is discovered, the fault should be reported immediately.

If the electrical material after conducted control, has been exposed to a harsh environment (for instance heat, moisture, chill, mechanical affect) it should be controlled again regardless if the electrical material is within the control interval.

Marking

The marking of controlled electrical material should be conducted in a sustainable way and should state “control date” or “control valid until” and the person who performed the control. The control date may not be older than 1 year.

If required by Ringhals, the **contractor** should be able to show a control proof. The proof may be a certificate or a record from the electrical installer responsible for the contractor’s electrical material. The electrical installer should be registered at the Electricity Safety Authority.

The above is valid even if the control is conducted by a foreign electrical installer with corresponding requirement on registration with relevant authority.

10.2 Hoses and junctions

Approved compressed air hoses, junctions and hose clamps should be used.

10.3

Ladders

All mobile ladders should be type approved, yearly checked and marked with the latest control date as well as equipped with anti-slipping devices.

10.4

Scaffoldings, rails and beams

Scaffoldings may only be assembled/altered/dismantled by trained scaffolders. Prior to work on the scaffolding, it should be examined and approved.

Beams, scaffoldings and similar may not be loaded more than what is stated on the working site. If such information is missing, it may be obtained from the work management or the purchaser's access responsible.

Prior to removal of permanent rails, grill flooring, hatches etc, and a protection screening should be assembled. The permanent equipment should be replaced as soon as possible.

11

WASTE AND RECYCLING

A major objective for Ringhals is to be a nuclear power plant with strong responsibility for environmental protection. This means that we continuously make great efforts to recycle material and reduce consumption of products that cannot be recycled. As a part of this ambition Ringhals has developed a smoothly functioning system of sorting waste at the source. All personnel including contractors must use the sorting system.

All waste from the radiological controlled area is considered to be radioactive waste. Production of radioactive waste should be minimized. In order to reduce the waste volume, it is important to separate waste that may be clean from radioactivity.

Waste and residual products transported out from Ringhals area must be reported to the waste department. This also includes waste/residual products from own material and work.

Residual products that are not recovered by the contractor must be taken care of according to the current rules at Ringhals regarding disposal of environmentally harmful waste and assortment of waste according to source. The extent of this is to be reported to the purchaser.

11.1

Hazardous waste

To prevent liquid hazardous waste from contaminating the environment, it shall be kept enclosed. All hazardous waste must be left at the waste disposal plant. The waste must be marked with a special sticker (Declaration of hazardous waste) with information about the contents and the name of the deliverer.

12 HAZARDOUS GOODS INCL. RADIOACTIVE MATERIAL

Hazardous goods is a collective concept for substances and objects with such hazardous properties that they may cause damage to people, property or the environment, if they not are handled properly during transport. The purpose with applicable laws is to prevent and limit transports with hazardous goods to cause damage.

12.1 Arrival

All hazardous goods transports including radioactive material, arriving at Ringhals shall follow applicable rules. When vehicles loaded with hazardous goods arrive, the driver shall hand over following information to the guard:

- UN-Number
- Hazardous goods class
- Name of the receiver

Goods in class 1 (explosive substances and objects) may not be entered within Ringhals premises without a special permit.

Vehicles and package showing shortages that may affect the safety during load or unload will not have access to Ringhals area.

12.2 Transport within Ringhals industrial area

External arriving transports shall follow the guard instructions concerning transport route. Labelling and marking of vehicles and packages shall not be removed before the vehicle has been unloaded.

Drivers without “cicerone” shall stay close to the vehicle during loading/unloading.

12.3 Shipping

Ringhals Health and Safety office (NSS5) administrates all shipping of hazardous goods used at Ringhals.

Exception:

- Radioactive sources owned and used only by the contractor company. Approval for shipping of radioactive source shall first be collected from the Health and Safety office (NSS5).

13 FIRE PROTECTION

There is a training requirement, please see appendix 2 – Hot work and Fire protection Ringhals.

In case of fire you must alert the rescue organization at Ringhals by dialling the alarm centre at the emergency number **3333** or from external mobile phone emergency number **112**. The personnel on the spot must warn others in the close vicinity and then try to extinguish the fire by using the firefighting equipment at hand.

13.1 Fire technical protection permit

A fire technical protection permit shall be collected from the concerned Health and Safety office and is necessary in the following cases:

- a) During hot and explosive works
- b) At disconnection of fire detectors
- c) At making holes in a fire cell limit
- d) Storage of compressed gas cylinders
- e) Work in explosive classified areas
- f) At other temporary deviations from the ordinary fire protection level when this is not regulated with an instruction (“technical exchange”)

13.2 Explosive classified areas

Hot work within explosive classified areas requires a non-gas declaration and issue of a hot work permit.

Only approved explosive classified equipment may be introduced within explosive classified areas. This restriction is valid for scrubbing machines, electrical tools, hand instruments, etc.

13.3 Inflammable liquids

Inflammable liquids (maximum 25 litres per fire cell) must always be kept in explosion safe containers. Max 5 litres may be taken to the work place. The containers must be clearly marked with a declaration of content. When not in use the containers must be kept in special lockers

13.4 Gas cylinders

All gas cylinders must be marked with a special label showing the owner. Storage of the cylinders must be carried out in consultation with the relevant Health and Safety office.

When be used for hot works gas cylinders containing oxygen and acetylene must have a flash back arrestor and the blowpipe handle should be equipped with a non-return valve.

A fire technical protection permit is required for storage of compressed gas cylinders for both oxygen and acetylene.

13.5 Fire doors

The fire doors are an important part of the fire sectioning in order to prevent spreading of fire. The fire doors should not be kept open or obstructed in their function.

If a fire door must be kept open or in other ways be obstructed in its function, a technical exchange must be carried out. Please contact the operations management or the Health and Safety office.

13.6 Emergency exits and markings for emergency evacuation

Emergency exits may not be blocked so they prevent evacuation. **The markings (luminous floor markings) for emergency evacuation must not be covered or blocked.** If the luminous floor markings must be covered or

blocked, the Health and Safety office must be contacted in order to make a temporary drawing of the line.

An escape route shall have at least 0,9 m (door opening 0,8 m) free width. In some areas where only a few people are staying temporarily, 0,7 m free width is accepted.

Electrical cords, hoses or similar that must cross the escape routes, should be suspended on a safe height or be rerouted in such a way that they are not damaged or cause accidents.

13.7 Fire-load density

Avoid introduction of unnecessary packing material, wooden pallets, etc.

Unnecessary fire-load density such as wood, paper, plastic, clothes, flammable substances, etc, should be transported out from the plant soonest possible. If the fire-load density is increased a technical exchange should be considered in consultation between the plant management and the Health and Safety office.

The fire-load density should be kept as low as possible and is forbidden in escape routes.

14 PREVENTIVE RADIATION PROTECTION MEASURES

When working in a radiological controlled area, special radiation protection rules and the Health and Safety office's instructions should be followed.

There is training requirements before a worker can access to a Swedish nuclear facility and to radiological controlled areas, see chapter 17.1.

14.1 Medical classifications

All personnel working in a controlled area, who are employed at Ringhals or a entrepreneur from external company, must have undergone a "medical classification" with approved result. This is also a requirement for apprentices, trainees, students, if there is need for them to access the controlled area for educational purposes.

14.1.1 Medical classification conducted in Sweden

The medical classification is an assessment based on a medical examination or a health declaration. The first medical classification must always be based on a medical examination. The medical classification should be based on the work involving the risks from ionizing radiation. When working on a nuclear facility the risks from external radiation, skin contamination and as well internal contamination are to be assumed, and this should be considered in the medical classification.

The medical classification must only be performed by a qualified physician.

The medical classification, which is based on a medical examination or a health declaration, is valid for a maximum of 1 year. Thereafter following applies:

- A new medical examination is required at least every three years.
- For the intermediate years the medical examination can be replaced by a health declaration. The health declaration form is to be filled in and signed by the worker and then submitted to a doctor, preferably to the person who issued the previous medical classification certificate. This doctor then issues a new extended certificate.

The outcome of the medical classification consists of three options: "fit for work", "Fit for work under certain conditions" or "unfit for work". Worker that is "unfit for work" is not allowed to access the controlled area.

The medical classification certificate must be based on following:

- If the medical examination is based on a medical examination or a health declaration.
- That the doctor is competent (qualified doctor/physician)
- The doctor's signature.
- Contact information to the doctor / medical centre (preferably with telephone number).
- The outcome of medical classification.

When the outcome is "fit for work under certain conditions", the physician should evaluate whether a renewed medical examination is required more often than every three years, the valuation should be reported to the department of Dosimetry at Ringhals. The medical certificate must then always be presented at Ringhals together with an action plan to fulfil the conditions.

When there is a change in health status which may affect the workers 'fit for work' conditions a renewed medical classification must be made. This should be clarified between the individual and the doctor who issued the previous certificate. The management has a responsibility to take this into account.

It is enough if the 'fit for work' certificate is shown to any of the Swedish nuclear facilities. The time of the last issued medical classification must be documented for each worker at the nuclear facilities common dose register, called "CDIS". If that information hasn't already been documented, then the worker must show the certificate when arriving at Ringhals nuclear power plant.

Forms for medical classification ("Medical certificate - Work with ionizing radiation ") and health declaration (" Health declaration - Work with ionizing radiation") on the SSM website can be used and can be found at:

see <https://www.stralsakerhetsmyndigheten.se> → 'E-tjänster och blanketter' → 'Läkarundersökning (tjänstbarhetsintyg)'. The forms are currently only available in Swedish.

14.1.2 Medical classification conducted in other country than Sweden

All foreign workers must present some form of documentation that shows conducted medical classification involving work with ionizing radiation.

As a basic principle for medical classification performed by doctors abroad, the following applies: the regulations established in the country where the medical classification has been conducted, shall be applied. However, there is nothing which prevents a foreign worker from going through a medical classification by a physician in Sweden, who meets the criteria of section 14.1.1.

Workers who have completed a medical classification in a country within The European Union (EU) or a country which has signed the Agreement; The European Economic Area (EEA) should have dose passports which also proves issued medical classification. If this information is missing on the dose passports, then the actual medical classification certificate must be presented.

The dates for when the medical classification was issued and/ or for how long it is valid, must be stated on the document. Please note that foreign medical certificates / documents can be valid for longer than one year, this is governed by the respective country regulations. The medical certificate must be signed by a doctor and contact information for the doctor must be stated.

Workers who conducted a medical classification in a country outside the EU must also prove the results from the medical examination. This can be done by attaching the underlying test results to the medical classification.

The above described working method is considered to meet the Swedish requirements for medical classification. The task of approving medical classifications performed abroad is delegated to the department of Dosimetry at Ringhals.

14.2 Dose reports before work in Ringhals controlled areas

The dose limits from the Swedish Radiation Protection Regulation must not be exceeded. A satisfactory margin must be maintained compared to the dose limits. The work should be planned and followed up so that no dose limits are exceeded during work at Ringhals nuclear power plant.

All external employees as well as apprentices / trainees / students must upon access to controlled area present a documentation which shows received doses during the current calendar year.

14.2.1

Swedish citizens

There is information on doses received for employees or apprentices / trainees / students with Swedish citizenship which recently participated in a radiological work at a Swedish nuclear facility connected to CDIS. Other workers with Swedish citizenship must be able to prove the doses received from other facilities, alternatively prove that they have not participated in a radiological work.

Examples of doses that are not in CDIS and therefore must be reported separately are doses from radiographing work in uncontrolled area, work involving ionizing radiation in hospitals and universities or work abroad at another nuclear plant. These doses should be reported on special form "Dose Report" signed by the workers employer upon arrival at Ringhals. The form is available at:

<https://group.vattenfall.com/se/var-verksamhet/ringhals/ringhals-nuclear-power-plant/access>

14.2.2

Other EU citizens

Employees who are citizens of another EU other country than Sweden should, before work may be carried out in a controlled area, present a dose passport which shows the doses received during the current calendar year.

Upon arrival at Ringhals the employees must also report the information on a special form "Dose Report" signed by the workers employer (employer representative at Ringhals).

The form is available at:

<https://group.vattenfall.com/se/var-verksamhet/ringhals/ringhals-nuclear-power-plant/access>

Workers from the EU countries who do not issues dose passports, should present other documentation of the doses received during the current calendar year. However, the signed and completed "Dose Report" form is the least required document that must be presented upon arrival at Ringhals.

14.2.3

Citizens of countries outside the EU

Workers who are citizens of a country outside the EU must present documents containing the doses received during the current calendar year. The employer must sign these documents and contact information should be stated. However, the signed and completed "Dose Report" form is the least required document that must be presented upon arrival at Ringhals.

The form is available here:

<https://group.vattenfall.com/se/var-verksamhet/ringhals/ringhals-nuclear-power-plant/access>

14.3 Dose limits

The dose limits stated below are prescribed in the Swedish Radiation Protection Law, Radiation Protection Regulation or in regulations from the Radiation Safety Authority.

External radiation exposure of the entire body

Category	Dose limit
Men and women from 18 years and above. Whole body Eye lens Skin Hands and feet	20 mSv per calendar year. 20 mSv per calendar year. 500 mSv per calendar year. 500 mSv per calendar year.
Apprentices, trainees and students between 16 and 17 years of age. Whole body Eye lens Skin Hands and feet	6 mSv per calendar year. 6 mSv per calendar year. 15 mSv per calendar year. 150 mSv per calendar year. 150 mSv per calendar year.
Visitors and workers in uncontrolled areas. Whole body Eye lens Skin	1 mSv per calendar year. 15 mSv per calendar year. 50 mSv per calendar year.

Note. To reduce the risk of exceeding the dose limits set by the government, a margin in relation to the limits is applied at Ringhals.

14.3.1 Pregnant women

Women who are pregnant and have reported this to their employer are, during the remainder of the pregnancy, entitled to be relocated to work that doesn't involve ionizing radiation or other risky work where harmful effects is estimated to be present. This also applies during breastfeeding. See SFS 2018: 396.

For pregnant women who are not relocated, work should be planned so that the received dose to the fetus, during the remaining pregnancy, becomes as low as possible and so that the dose unlikely exceeds 1 mSv.

14.4 Ringhals internal dose restriction for individual dose

To limit individual doses, received at Ringhals and to create a good base for improvements, the manager of the concerned Health and safety group, concerned management and the concerned worker evaluates the reasons why the individual doses are expected to exceed 9 mSv during the current calendar year. If the person is allowed to pass Ringhals internal dose restriction 9 mSv, the decision from the evaluation must be approved either by the manager of the worker alternatively, if the worker is led by an external company, the responsible hiring manager and as well by the manager of Operational Protection.

The administrative dose barrier for whole body dose is set to 7 mSv for the current year. This means that workers who have a total whole-body dose of

more than 7 mSv doesn't have access to radiological controlled areas before the evaluating meeting or the limit in the dose system is adjusted.

14.5 **Ringhals internal dose restriction for women**

To limit the dose to a possible fetus in a woman of childbearing age a dose restriction of 3 mSv is applied for a period of two months. The purpose with this dose restriction is to limit the dose to a fetus at an early stage of the pregnancy. Note that this dose restriction doesn't aim to limit the woman's ability to work on the radiological controlled areas after confirmation that she is not pregnant.

The manager of the Health and safety group is responsible for ensuring that consultation takes place between the protective unit, the women and her management. A new individual dose restriction can be applied when the woman confirms that she is not pregnant.

14.6 **Dose reducing measures in work planning**

Overall management and planning of work should be carried out so that each individual's total doses estimates to become well below 15 mSv per year. The manager or supervisors has the responsibility to limit the doses received for their workers. When planning a radiological work, the principal rule is that all unnecessary radiation exposure must be avoided and that the doses are kept "As Low As Reasonably Achievable" (ALARA).

It is the work management's responsibility to take actions in order to achieve this object during the planning and carrying out of the work. This should be carried out in consultation with the Health and safety staff. The personnel involved must receive the necessary information.

Contractors

In connection with the work planning, consultations must be held with the supervisors or Ringhals access responsible and the Health and Safety staff concerning the appropriate protective measure in order to reduce radiation exposure for the personnel.

Contractors that due to legislation in a foreign country or for other reasons apply more restrictive dose limits or lower planning/control limits than stated above are allowed to use such rules when carrying out work at Ringhals. However, it rests upon the contractor management to control the observance of these rules. Ringhals Health and Safety staff will assist in this matter and give information from the dose register but they will assume no other responsibilities. It rests upon the contractor, who for some reason applies more restrictive dose limits to specify in the offer the applicable maximum doses and give information about how the divergences from the Ringhals regulations will affect the number of persons involved in the work in question.

14.7 Radiological work permit

Prior to every radiological work (specified on the work permit) a special radiological work permit must be received at the relevant Health and Safety office. The work permit states among other things, extra protection actions.

A radiological permit is required in the following cases:

- a) If the work is to be carried out in areas with yellow or red radiological classification.
- b) If the work includes the opening of a system that might contain radioactive contamination.
- c) If it's specifically required from the Health and Safety staff.

14.8 Personal protection equipment and dosimeters

Upon access to and during stay within the radiological controlled area, a personal TL-dosimeter and an electronic direct indicating dosimeter should be used. The dosimeters are provided by Ringhals.

Protective clothing

Within Ringhals' radiological controlled areas the following protective equipment must be used at least:

Protective clothing in terms of overalls, blue safety helmet, safety goggles and protection shoes for controlled area. Private clothes except for underwear and socks may not be used in radiological controlled areas. Private underwear may not be visible outside the protection clothes.

Washable shoes for all personnel and visitors are provided at every step over. Approved safety shoes of another kind shall be distinguished from shoes used at unclassified area by blue markings on the toecap. Shoes used within the controlled area may not be used in other areas.

Personal dosimeter of TL type

Personal dosimeter of TL type should be carried clearly visible in the intended strap in the overall closest to the body. The dosimeter should be brought from the controlled area at every exit and after the working day it must be placed in a rack carrying the same number as the dosimeter.

The TL dosimeter should be returned when the work at Ringhals is finalized. An evaluation of the dosimeters is carried out the month after. The result from the evaluation may be acquired via the Intranet or from each contractor company. The contractor companies receive each month, an extract from the Swedish nuclear power plants' mutual dose register from the last month.

If Ringhals employees shall work temporarily at another nuclear technical plant, this should be informed to the Dosimetry department well ahead in time. In connection with this, the dosimeter should possibly be evaluated prior to the person travelling to the foreign plant. The Dosimetry department may also, whenever required, assist contractors in the same situation.

In case the contractor, due to legislation in a foreign country or by any other reason requires a permission to carry his own dosimeters at Ringhals, they must be carried together with the dosimeters that are handed out at Ringhals.

The contractor together with Ringhals AB guarantees that this does not lead to a double report of the dose received.

Electronic dosimeter

The electronic dosimeter should be carried visible in the intended strap at the front of the overall. The dose code should be stated when the electronic dosimeter is collected. After visiting a radiological controlled area this dosimeter must be read out and placed in a charging rack.

14.9 Radiography

‘Control companies’ using radiation sources or radiographing equipment must have a permit from the authority. The Health and Safety office must be contacted before work with X-ray tube or isotope. It is the control company’s responsibility e.g. to erect appropriate barriers and warning signs and to contact the Health and Safety staff for control prior to work can begin.

When radiography equipment is not in use, it must be kept locked up and in safe storage protected from fire- and personnel risk. The responsible Health and Safety office may assign a storage room.

Radiography should always be proceeded by a ‘Pre-job briefing’ (PJB).

14.10 Barriers and signs

Barriers with ropes or chains are used in different situations with intention to mark or warn for a local change in the radiation environment. A barrier shall be considered as a wall or a closed door and may only be passed after performed prescribed protective actions.

In combination with the barrier, signs shall be erected with information about radiation level, contamination level, prescribed protection equipment and other actions. In some cases, the Health and safety personnel shall be contacted prior to access.

14.11 Prohibition of eating etc in radiological controlled areas

To reduce the risk of radioactive substances entering the body it is **absolutely prohibited to smoke, use snuff, eat, and drink or to put on make-up** and bring these substances inside radiological controlled areas. Exceptions are installed drinking fountains and special cafeterias inside radiological controlled areas where beverage and water are served.

14.12 Open wounds

Persons with unprotected open wounds are prohibited to work inside radiological controlled areas. If smaller wounds occur in radiological controlled areas, the wound should be checked on radioactivity before plaster is applied on the wound. Heavier bleedings may however be stopped by using emergency bandage.

14.13 Contamination checks

The bringing of equipment, material, tools etc into radiological controlled areas must be reduced to a minimum. Wrappings must not be brought into radiological controlled areas without special permission.

All personnel leaving a radiological controlled area must carry out a personal scanning in a pre-monitor in order to detect possible radioactive contamination. After washing, contamination check and undressing the protective clothes at the step over, everybody must carry out one final scanning in an additional portal monitor. If the monitor alarms, given instructions shall be followed.

Equipment and tools may not be taken out from radiological controlled areas unless it has been carefully scanned and approved. Personal equipment and tools may be surveyed in a scanner box by anyone. Other equipment, including process details, equipment with a risk for contained radioactivity, and equipment too large for the scanner box must be scanned manually by the Health and Safety staff. Waste is always handled by Ringhals waste department. Approval for release and free use are according to the values in the regulation SSMFS 2018:3.

In some countries there is a more restrictive legislation concerning radiological classification. If Ringhals is required to carry out a radiological classification measurement according to limit values existing in foreign countries this must be clarified in connection with the procurement.

14.14 Medical treatment with radioactivity

Workers examined or treated with radioactive substances may still have enough of radioactivity in the body to activate the alarm in the portal monitors.

Workers who have passed through such an examination/treatment shall take contact with one of Ringhals radiation physicists or radiological controller prior to access to Ringhals.

If there is still enough radioactivity to activate the monitors, the worker has no access to radiological controlled areas.

Access to non-radiological controlled area may be granted after information to the Security Centre. Alarm from passage and exit out of the industrial area is thereafter handled by the Security Centre based upon the information from the radiation physicists or the Health and Safety staff.

15 SECURITY AND ACCESS

The purpose of our security measures and control is to prevent unauthorized trespass, sabotage and prevent unauthorized persons from gaining access to the nuclear plant and to monitor that the flow of persons and material is in a controlled manner. The purpose is also to prevent unauthorized concern with fissile material and nuclear waste.

With support from the Protection Law (2010:305), Ringhals Nuclear power plant is classified as a restricted area. This means that access is prohibited and photo and imaging is banned without a special permission.

15.1

Access

There is a training requirement, please see appendix 2 – Access training

All access requires authorisation and is given after consideration according to local regulations to the unit or part of the plant where the work is to be carried out. The admission permit is time limited and is valid during the work period.

Access requirement should be reported at least three days prior to arrival and during outage period, seven days prior to arrival.

Security background check including register check

All internal Ringhals staff should conduct an approved security check prior to employment.

All contractors and consultants who should have access to Ringhals (including the industrial area) or Ringhals IS/IT system or safety classified information should conduct a security background check. Occasional visitors are exempted.

The security background check must be based on the knowledge of the person it concerns.

The security background test should indicate:

1. that the person is not under prosecution or has a criminal record
2. that the person does not have a drug addiction or a serious financial problem
3. that qualifications and certificates verify reliability during the last three years something that may be confirmed by references

The security check is completed with a register control showing that the information resulting from the security check isn't a burden.

Request for police register control to the relevant authority is done by Ringhals.

Security background check and police register control sent in and approved at another Swedish nuclear power plant is not valid at Ringhals. A new statement must be sent in to Ringhals. External personnel, who have not worked at Ringhals during the last 12 months, shall repeat the security background check and police register control.

It rests upon the contractor to guarantee that only known and reliable persons are engaged to work within Ringhals. Ringhals requires a security background check from all contractor personnel. The contractor must fill in

the form “**Collective certificate of security background check**” (see Ringhals external website) and send it to Ringhals. The certificate proves that a security background check is done.

“**Statement for register check**” (please see Ringhals external webpage) should be approved by applicants. A filled-out form for “**Generation of register check**” (please see Ringhals external webpage) should be attached.

The documents "Collection certificates for safety testing", "Consent for register control "and" Request for register control "shall jointly be Ringhals at least four weeks before the planned access date. Attached to these are folk records or copy of the passport (to prove the nationality of the person). For foreign staff, the processing time is considerably longer. Depending on the country, the processing time can be several months. The forms should be addressed to Tillträdesservice Ringhals.

Please observe that the above are minimum times required to grant access.

A person who has been evaluated as unsuitable out of a safety point of view is not granted access to Ringhals.

The contractor must contact Ringhals access responsible in all matters concerning admittance of persons and vehicles and when entering and removing goods and equipment.

Foreign personnel

A “Security clearance” certificate must also be attached. “Security clearance” must be approved by the security manager at Ringhals before access if the police register control is not completed. ”Security clearance” from another nuclear power plant can also be approved or a certificate from the police registers in the home country, issued by the competent authority. The certificate shall be written in Swedish or in English. Translations from a foreign language shall be attested.

Access for visitors, children and youth

For visitors there are special rules depending on whether it’s a service visit or a visit for study. All cases requires a notification of the arrival.

Persons below the age of 12 are normally not allowed access into Ringhals area.

Return of act´s

All access act´s must be returned when the assignment is finished. Costs for missing act´s will be charged to the employee’s company.

15.2

Vehicles

Admittance for private vehicles to the industrial area is not normally allowed. Exceptions for medical reasons and the like can be given and then allowed after review. Parking is subject to the designated locations. For contractors or consultants, only service vehicles might be authorized.

In order to gain entrance the vehicle and its load must be shown to a security guard who grants permission for the vehicle to enter the area or stipulates that a security guard must accompany the vehicle when delivering or collecting goods.

Entrance and exit control of vehicles may be carried out.

Admission to introduce vehicles further in on restricted area (operation area) is granted very restrictively.

15.3 **Safety control**

All personnel, all goods and all vehicles shall pass a safety control prior to access and granted entrance to restricted areas (operation area). Forbidden items are for instance weapons, knives, explosives and camera, including mobile phone with camera and may not be introduced without a specific approval.

The standard procedure for the safety control is among other things X-ray scanning of baggage and goods, metal and explosives detection and sniffer dog.

It's the shipper's responsibility that goods, subject to inspection, must have a bill of carriage or pick list that clearly describes the content with the shipper's name and phone number, and who is responsible recipient in restricted area, and his phone number

15.4 **Surveillance**

By a combination of technical means such as locks, alarms, cameras, access and safety control and by personnel surveillance carried out by security guards, it is guaranteed that unauthorized persons are unable to gain access to the area unnoticed and that forbidden items are not brought into the area.

All personnel are obliged to follow instructions posted on signs and orders from the security guards. A security guard has the right to carry out a control of authority, send away, remove or temporarily take into custody. If necessary the security guard is also allowed to perform personnel searches and to inspect hand luggage etc.

15.5 **Interior surveillance**

Everyone who is granted access are expected to participate in the safety work and report observations of importance for safety to manager, access responsible or in emergency situations to the security guard, alarm number 3333.

Your admittance card must be visible at all times.

Authorization is required for all photographing and filming at Ringhals for hired staff or visitors.

NOTE! All personnel are prohibited to take photos with a mobile camera inside the industrial fence.

15.6 Measures in order to prevent theft

Everyone has a personal responsibility for his/her belongings and should keep it in a safe way.

All goods and materials that are to be taken out of the plant must carry a permit signed by the superior or an import list verified by a security guard. Security personnel carry out the control.

16 INFORMATION SECURITY

Ringhals information is divided into four security classifications according to a damage evaluation based upon the following criteria:

- **Open information:**
Information obviously intended for external use or publication.
- **Internal company information:**
Minor damage for the company, customers, cooperating companies, persons or business associates.
- **Internal company information, limited:**
Some damage, business-wise, for the company, minor damage to national security. Otherwise minor damage to Ringhals and its customers, cooperating companies, persons or business associates.
- **Secret information:**
Serious damage to the company, customers, cooperating companies, persons or business associates.
- **Qualified secret information:**
Very serious damage to the company, customers, cooperating companies, persons or business associates. Information that might in the short or long term jeopardizes the company's survival.

In connection to assignments, everyone is obliged to remain informed about the current regulations concerning company secrecy.

Company internal information shall not unnecessarily be spread outside the company and may not be handed out to unauthorized personnel.

Secret or qualified secret information must only be handled by personnel who are authorized in this respect and must not be revealed to anyone or be removed from the place of work without written permission from Ringhals. An authorized person is someone who needs the information in order to be able to carry out his/her work and has been considered suitable and reliable from a secrecy point of view and also has received the necessary information concerning the handling of secrecy matters.

All personnel who are about to receive **classified information** must be aware of the following:

1. The law concerning the protection of company secrets and safety protection legislation.
2. Ringhals regulations in the matter.
3. The information Ringhals wishes to keep secret.
4. Contact persons in different matters of secrecy.

5. Ringhals has the right to pledge contractor personnel with a written obligation to observe professional secrecy in connection to the assignment.

16.1 Compilation of Ringhals security classification

	Open	Internal company	Internal company limited	Secret	Qualified secret
Internal e-mail and sync mobile	No restriction	No restriction	No restriction	Only with approved encryption	Not allowed
External e-mail and sync mobile	No restriction	No restriction	Only with approved encryption	Contact NQL, E-mail according to routine ID:2451528 approved encryption	Not allowed
Internal mail	No restriction	No restriction	No restriction	First, handover personally otherwise sealed envelope marked "Personally" and name	Handover personally or with a courier
External mail	No restriction	Sealed envelope	Sealed envelope	As registered letter in a security letter or personally transmitted	Handover personally or with a courier in a security letter
Removable memory media e.g. usb, DVD (no private removable memory media is allowed)	No restriction	No restriction in Ringhals. Otherwise encrypted or with protected password	Encrypted or with protected password	Always encrypted or with protected password	By special decision and then encrypted. Has to be stored in locked rooms.
Printing	No restriction	No restriction	Allowed on network printer if supervised or with access	Allowed on network printer if supervised or with access	Supervised on not network printer
Archive	No restriction	In document management systems in intended archive	In document management systems in intended archive	In document management system/safety box	In document management system without file/safety box
Storage on a server or database	No restriction	Authorization control before access	Authorization control before access	Encrypted or secure storage area, ordered in IT service portal	Not allowed, concerning file
Destruction	No restriction	In Ringhals ordinary paper recycling containers. Other physical media in a secrecy container at the environmental station	In a paper shredder class P3 Media obtained from Vattenfall IT is returned there	In a paper shredder class P5 Media obtained from Vattenfall IT is returned there	In a paper shredder class P5 Media obtained from Vattenfall IT is returned there
Telephone	No restriction	No restriction	Ensure access and privacy	Ensure access and privacy. Only with approved encryption	Ensure access and privacy. Only with approved encryption
Fax	No restriction	No restriction	Supervised dispatch and receiving	Supervised dispatch and receiving	Only with approved encryption
Travel	No restriction	No restriction	As hand luggage, and supervised	As hand luggage, and supervised	Under constant supervision, stored in safety box when not handled
Meetings	No restriction	Clean whiteboard. External meetings under supervision	Clean whiteboard. External meetings under supervision	Assess the risk for interception. The room should be locked	Investigate the risk for interception. Don't let it be unguarded
In own office	No restriction	No restriction	Supervised, otherwise in locked room/box	Supervised, otherwise in safety box	In safety box

GENERAL REQUIREMENTS FOR ADMISSION TO RINGHALS

To get admission to Ringhals there are a number of general requirements for certificate and training:

- **Notification of the arrival**

The application for admission must be reported well ahead in time by Ringhals admission responsible, please see chapter 15.1.

- **Result from drug test**

Approved drug test is required for access to the operating range (protected area) and for work lasting more than five days within the site area, please see chapter 3.1.

- **Security background test including register check**

For admission to Ringhals, the following forms should be sent in one lot to Access service at Ringhals, please see chapter 15.1.

- Information about Security background check/Consent to register control (by the person concerned)
- Security Clearance (by company) – valid 1 year from date of issue
- Extract from the home country's criminal records – maximum 6 months old, valid 1 year from date of issue
- Statement for register control according to the security protection act (filled in digitally)

- **Medical examination/periodic control**

Declaration for work in radiological areas, please see chapter 14.1.

- **Dose report (Dose declaration)**

Is required for foreign citizens and for Swedish personnel who have performed work with ionising radiation and when their dose has not been registered in the Central dose register. This may be the case at work abroad, please see chapter 14.2.

- **Required training**

Please see appendix 2.

- Everyone who wishes to gain access, should be able to **prove their identity** with SIS approved ID-document, driving licence or passport. As for foreign citizens the requirement is a valid passport or domestically approved ID-document with English text. The required information on the document is: first and surname, date of birth, photo, validity date, signature and card number.

TRAINING

All personal with access to Ringhals are obliged to participate in the Access training depending on where in the plant access is requested.

Ringhals has two different Access trainings:

1. **Protection and Safety** – For access to a nuclear facility
2. **Radiation protection in practice** – For access to the radiological controlled area

Questions about Access training and reservation to Radiation protection in practice is handled by the [Access service](#) at Ringhals. It's also there you leave the certificates from completed training for registration.

Depending on the type of work you should conduct, some other training sessions may be required. Information on which of the above requirements applies is provided by the hiring organization.

The contracting manager or the course administration assist with booking of other training, [Ringhals utbildning](#)

Further information about training is available on [Ringhals external webbsite](#).