



Safety and Environmental Manual

2024

Suosiola power plant
Heating plants
Mustikkamaa fuel terminal
Suksiaapa ash landfill
Aitamaantaussuo





Sisällysluettelo

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1 Introduction

The purpose of this manual is to determine the minimum requirements for taking safety and environmental aspects into account in the operations of contractors, and contracted service providers and suppliers at Neve Oy. The manual also applies to all other external employees working at Neve's sites and Neve's own personnel. Procedures that comply with this manual are in place at Suosiola power plant, the dedicated heating plants, Mustikkamaa fuel terminal, Suksiaapa ash landfill and Aitamaantaussuo peat extraction area. In addition to the parent company, the manual applies to the operations of Neve's subsidiaries Ranuan Bioenergia Oy and Neve Isommus Oy (Aurora Lämpö Oy).

Neve's employees, contractors, contracted service providers and suppliers, and other employees working at Neve's sites agree to comply with this manual. Sanctions may be issued to external contractors, partners, and contracted service providers and suppliers for neglecting the guidelines, depending on the severity of the breach.

Neve Oy and Neve Isommus Oy use a certified ISO 14001 environmental system, an ISO 9001 quality management system and an ISO 45001 occupational health and safety system. These standards form the framework for the systematic management and development of the environmental, quality and safety elements. Neve's [HSEQ policies](#) and [objectives](#) can be viewed on Neve's website (in Finnish).

Everyone can influence their own and other employees' safety by removing risk factors before commencing work, reporting deviations in safety and complying with the safety guidelines. Every employee has a right to suspend work that may cause an immediate or serious danger to themselves or others.

Everyone is responsible for creating a culture of safety through their actions and serving as an example to others. If we all operate in a consistent way and remind others of the rules that we share, we will be able to return home after the work day, safe and sound. The aim is to have zero occupational accidents!

2 Emergency plans

Contractors, contracted service providers and suppliers, and Neve's employees must familiarise themselves with the emergency plans of the sites at which they work. The emergency plans describe the potential risks at the worksite and work locations and provide instructions on what to do in case of an accident. The contractors must become familiar with the emergency plans and ensure that their own employees know what to do if an accident occurs.

The following locations have emergency plans in place:

- Suosiola power plant
- Aitamaantaussuo peat extraction area
- Mustikkamaa fuel terminal
- Kairatie heating plant
- Muurola heating plant
- Nivavaara heating plant
- Norvatie heating plant
- Ounasvaara heating plant



Small heating plants are not legally required to have an emergency plan. The following plants have emergency guidelines, which provide the contact details of the plant and instructions on what to do if an emergency does occur. Additionally, the oil plants have response guidelines for oil spills:

- Hillerintie heating plant
- Kolari heating plant
- Savukoski heating plant
- Ylläsjärvi heating plant

Becoming familiar with the emergency plans and guidelines must be noted down in an employee's induction form.

The map of Suosiola power plant shows the assembly points in case of an emergency. Emergency assembly point is located in front of the "M-building"/main warehouse/"kyllästämö". The assembly point is marked on the map of the area **(on the back page of the manual)**.

The exits and escape routes must always remain unobstructed, and they must lead to a safe place as directly as possible. Even though an automated fire alarm system is in place, the emergency response centre must always be called in case of a fire!

Suosiola power plant has a defibrillator, which can analyse the heart's rhythm and will give an electric impulse in order to restart the pulse. The defibrillator is in the first-floor entrance lobby of building A. The defibrillator's location is marked on the map of the area **(on the back page of the manual)**.

3 The Priima application

Neve uses an HSEQ application called Priima. Safety, security, quality, environmental and cyber- / information security deviations, accident and near miss incident reports, safety walk-arounds (TR, MVR and MVRs) and brief safety meetings are recorded into the application. Neve requires that a service provider or supplier note all the observations, near miss incident and accident reports, as well as worksite safety walk-arounds/meetings in the Priima application. Priima can be used on a smartphone or web browser on PC.



A contractor/partner can be given user credentials for their employees to log in to the application, as necessary. Observations may also be made without user ID at <http://neve.acc.fi/havainto> or through a QR code (image 1). Neve Oy and a service provider or supplier may decide which option will be used. Neve Oy will provide a contractor/partner with an induction to the use of the system.

Image 1 The QR code for reporting observations

Occupational accidents and near miss incidents must be reported without delay to Neve Oy (e.g. by phone or via email) and recorded in Priima. The accidents and near miss incidents must be processed by Neve and the service provider or supplier as soon as possible. A worksite's safety observations reported to the system are discussed at meetings in accordance with the agreement.

If an accident occurs, the worksite may not be left unmonitored if that can cause danger to outsiders (e.g. an electrical accident due to live work equipment or cables). An ambulance must be called to the scene, and another employee must ensure that the worksite is safe.



A total of 10 minor injuries, 30 dangerous incidents and 600 incidents without injury or damage occur for every serious personal injury. It is extremely important to process all the observations, incidents and accidents in order to prevent serious damage.

During the summer outage, weekly safety inspections are carried out at the shared workplace at specifically allocated times. All the observations and defects are documented, defects that require action are remedied without delay, and the remedial actions are recorded as having been taken.



Image 3 The QR code and location in the boiler room, next to the lift

4 General operating procedures

Everyone working and visiting any of the worksites is legally obligated to report any faults (Section 19 of the Occupational Safety and Health Act 738/2002). Reports must be submitted on the following according to Neve's instructions:

- accidents
- near miss Incidents
- property damage
- safety risks identified
- environmental harm.

4.1 Qualifications and ID

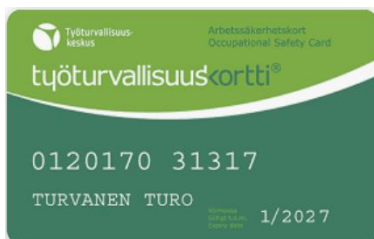
All employees working in any area or at any worksite must have:

- valid occupational safety training
- a hot work licence if carrying out hot work or serving as a hot work sentry
- a valid SFS6002 for carrying out electrical work
- suitable training for live work (0.4–110 kV)
- First Aid course EA1® or Emergency First Aid for electrical work
- Road Safety 1 for those working in road areas and Road Safety 2 for managers
- a visible picture ID badge that displays the employee's name, employer and tax number.

In addition to the Centre for Occupational Safety's Occupational Safety Card™, the following are acceptable forms of proof that a contractor has undergone occupational health and safety training:

- Verkkokoulu.com
- Presto
- Safedo
- Pohjois-Suomen Työturvakoulutus

The Swedish SSG Entre's occupational safety certificate is the only foreign occupational safety training approved without further proof necessary. For all other courses completed abroad, a description of the course content must be submitted to Neve's representative in Finnish or English. The eligibility of these certificates is assessed on a case by case basis.



Neve's own personnel are still required to have the Centre for Occupational Safety's Occupational Safety Card™.

Image 4 The Centre for Occupational Safety's Occupational Safety Card™

Depending on the site and task, other qualifications may also be required. Proof of these qualifications must be presented to the Neve or Neve's representative, if requested.

The qualifications of partners and operators, their pictures and validity dates are typically recorded in Priima when taking a test on the Safety and Environmental Manual. The instructions on how to record qualifications can be found in Appendix 1 to the Safety and Environmental Manual.

If separately agreed with Neve, qualifications and their validities may be recorded on an employee's induction form, and the required pictures of the qualification cards, as well as a list of employees with their individual qualifications and qualification validity dates, can then be submitted to Neve. This list is used as proof of qualifications to Neve. The list will be kept for three months after the end of the agreement.



In addition to that, it is recommended that each contractor have employees who have completed at least the emergency first aid course or EA1 training.

4.2 Alcohol, intoxicants, and smoking

A zero tolerance applies to being under the influence or in possession of alcohol or other substances/intoxicants. A breach of this policy will result in a removal from the area and either a temporary or permanent ban.

Neve has a right to breathalyse anyone arriving in the area and, if necessary, prevent a person's entry or remove them from the area. If a person is suspected of having driven a vehicle while under the influence, Neve's representatives or another operator who noticed it is obliged to call the police.

Smoking is only allowed in designated areas. The designated smoking areas have been marked on the Suosiola sitemap.

4.3 Induction

4.3.1 Safety and Environmental Manual

All external contractors, contracted service providers and suppliers, and other external employees working at Neve's sites, at Suosiola power plant or heating plants must study Neve's Safety and Environmental Manual before commencing work. The induction to the Safety and Environmental Manual takes place in Neve's HSEQ-application Priima. The induction will remain valid for one calendar year at a time.

The main contractor is responsible for the induction of all the subcontractors and other operators present at a site, including delivery operators, waste transporters, etc. A contractor's/contracted service provider's/supplier's/partner's designated person/manager ensures that all their employees who work in the area have undergone the induction.

A contractor, contracted service provider and supplier, and other external operators must ensure that when employees change, all new employees complete the induction before entering an area. The contractors, contracted service providers and suppliers, and others working at Neve's sites must comply with this manual, monitor compliance with the manual and intervene in any deviations. If a contractor/contracted service provider/supplier/partner neglects their induction responsibility, Neve has a right to issue a sanction.

4.3.2 Work location

Every employee must receive induction to their work area before commencing work. A general induction pertaining to a specific agreement period is sufficient for annual works and maintenance when it comes to repeated work locations and phases. The induction documents of a work location or annual works must be submitted to Neve before commencing the work.



4.4 Risk management

Each work location must undergo a hazard identification and risk assessment process. The assessment must be carried out before the work commences and discussed between Neve and a service provider or supplier. The assessment will be stored as documented information. Suosiola's risk matrix template can be found in Appendix 4 of the Safety and Environmental Manual (In Finnish). A service provider's or supplier's own template may also be used in risk assessment, if so agreed with Neve. If Neve so decides, the Think for a Moment (Tuumaa hetki) form may be used for small ordinary jobs. This form must always be completed in writing.

A risk assessment must always contain the following information in order to be accepted:

- The entity being assessed
- The assessment date, company and participants
- The risk matrix used, including category descriptions
 - Probability
 - Consequences
 - Risk level and the required measures to reduce the risk
- A risk assessment must include all work phases that take place at Neve's sites/work locations, from the reception of material to transfer, lifting, installation or demolition, as well as the use and maintenance of machines.
- A risk assessment must define the following for each hazardous situation:
 - Damage type (personal injury/environmental damage/quality and property damage); a situation may involve several damage types
 - Record the consequences if the risk materialises
 - Record the existing preparatory measures
 - Assess the probability and consequences of the risk according to the risk matrix that is used, which determines the risk level
 - If the risk level is too high, measures to reduce the risk must be defined, and assigned a timeframe and a person responsible for measures.

Once a measure has been carried out, the completion date is recorded in the risk matrix and the residual risk is assessed.

The party carrying out a job or their representative must take part in the assessment connected to the work location. The risk assessment is used to carry out the necessary safety measures and grant the work permits required. A dedicated work permit must always be created for particularly hazardous work (e.g. hot work, work inside tanks, working at height).

A contractor's management must hold a brief documented safety meeting once a week to its employees during outage work. All new individuals who enter a worksite must be familiarised with the risk assessments before commencing work.

4.5 Responsibilities and obligations at a shared workplace

Neve's worksites and work locations follow the norms specified in Sections 49–53 of the Occupational Safety and Health Act (738/2002). Additionally, the construction sites comply with the provisions of the Government Decree on the Safety of Construction Work (205/2009).

Everyone is obligated to take action if they detect anything that endangers health and safety:

- Suspend the work, if necessary, until the hazard has been removed and warn others.



- Remove the hazard on your own, if possible.
- Notify Neve's representative of any hazards detected, even if the hazard has been removed.

The sites are equipped with recording CCTV.

4.5.1 Neve Oy

Neve is responsible for the safety of its own personnel and workplace, in accordance with legislation. Neve is also responsible for the hazards involved in its operations, their removal and mitigation, as well as the induction regarding the hazards.

Neve is obliged to provide a service provider or supplier with adequate information about the safety factors and requirements regarding the work commissioned, as well as the risks caused to other parties by Neve's own operations.

4.5.2 Service providers and suppliers

A service provider or supplier must nominate a contact person and a designated manager. During a work performance, a service provider or supplier and its subcontractors must have a contact person in the area and in connection to the work, authorised to represent the employer.

4.5.3 Management and control

Contractor, service provider or supplier company is responsible for managing the work assigned to it and monitoring its employees at a workplace. Neve's instructions to contractor's, service provider's or supplier's employees on how the work must be carried out do not remove or shift this management responsibility away from the operator.

The management is responsible for ensuring that those carrying out a job have sufficient understanding of the job and the related hazards before commencing the work.

Contractor's, service provider's or supplier's management may not allow its employees to commence work if a necessary work permit has not been issued for it, the risk assessment for the work or area has not been carried out or induction/guidance on how to safely carry out the work has not been provided at the site. Work permits, induction and risk assessments must always be completed in writing and submitted to Neve before commencing work.

Management is responsible for monitoring that work is completed in accordance with the instructions provided and that the necessary pre-emptive safety measures and protections are in place. Management is also responsible for monitoring that the required PPE is used and work is done according to the safety measures. Management must intervene immediately and suspend the work if any shortcomings are detected regarding PPE and other safety measures. Work will only recommence once it can be carried out according to the safety regulations.

Management must monitor that the employees operate according to the rules of this manual and intervene immediately in case of any shortcomings. A contractor's management must hold a brief documented safety meeting once a week to its employees during outage work. All new individuals who enter a worksite must be familiarised with the risk assessments before commencing work.



4.6 Employees' responsibilities and obligations

All current laws, regulations and other provisions, as well as the guidelines and standards, must be followed at the sites.

- The use of mobile devices must not pose a safety risk during a work performance.
- Safety goggles must be worn at all times.
- Ear defenders equipped with radio are forbidden without a separate permission.

Maintaining contact that is necessary for carrying out a job safely is allowed.

The exits and escape routes must always remain unobstructed, and they must lead to a safe place as directly as possible. Neve determines an assembly point where everyone must assemble in case of an incident.

Employees must carry out their work in a professional manner and according to the rules and instructions provided.

Employees may not change the work plan or approved work permit on their own. A change of work content may only be approved by a person representing the employer (management) or Neve's representative, if specifically agreed on in writing.

Employees are responsible for providing a notification for any changes in their work to the management before commencing work or immediately after a change has been noticed. This includes changes to the work plans, the way in which work is to be performed or the method, detection of a hazard, insufficient or inoperative protective or other safety measures and/or a work result that deviates from the plans.

Only the tools and methods intended for a specific job may be used. The tools must comply with legislation and be in good working order. Their protection features may not be removed. A written work permit and a risk assessment are always required for work classed as hazardous.

While the plant is operating, employees must report any faults and defects directly to the control room (e.g. leaks, unusual sounds).

All individuals working or visiting the work locations must immediately report the following things, in accordance with Neve's instructions:

- Accidents
- Near miss Incidents
- Property damage
- Anything that may harm safety/the environment/quality/data security
- Environmental harm

The nearest emergency exits and escape routes must always be verified before commencing work. If the evacuation light or alarm is activated, everyone must exit the space immediately and make their way to the assembly point, if possible. The power plant generates high-pressure steam, and an area with a suspected steam leak must never be entered.

4.7 Personal protective equipment

The PPE listed below must be used at Suosiola and all of Neve's work locations. The only exception is the pedestrian route marked in the yard, where the use of PPE is not mandatory.

- a helmet equipped with a chin strap
- protective goggles
 - an electric arc flash visor that covers the entire face must be used in live work
- ear defenders (where necessary)
- safety footwear
- work clothing (SFS-EN 471 or SFS-EN ISO 20471 in street and road areas)
 - work clothes that comply with standards SFS-EN ISO 11612, EN 471, EN 61482-2 and EN 1149-5 must be worn during electrical work
- work gloves (where necessary), cut/puncture resistant gloves
- an ID badge.

Goggles are chosen according to the task, and they must be worn at all times. The use of a bump helmet is not allowed. If an employee's PPE requirements are stricter than this, the stricter rules must be observed. All PPE must be CE marked.

If the PPE rules are disobeyed, Neve or its representatives has a right to remove the employee from the worksite/work location. Furthermore, repeated neglect regarding the PPE may result in a fine, in accordance with the sanction policies described in Chapter 13. The sanction charges will be issued directly to the contractor whose employee has breached the rules.



a helmet equipped with a chin strap



ear defenders



protective goggles



high visibility clothing



safety footwear



work gloves (where necessary),
cut/puncture resistant gloves



ID badge

Image 5 The personal protective equipment to be used

4.8 Visitors

All visitors arriving at a worksite will receive an induction on the general rules of the workplace and be provided with the required PPE. Visitors may only move around the area when accompanied.

Visitors' PPE can be picked up from the Kyllästämö building, which is to the right after the gate. Access to the work locations and meeting rooms takes place along marked routes with an accompanying person. Neve Oy will not be responsible for any personal belongings left in the office facilities.

Visitors must use the PPE listed below when moving around Neve's work locations or worksites. A host must inform the visitors of the location's/worksite's exits and assembly points, in case of an accident. The instructions on how to exit the meeting facilities at Suosiola power plant are provided in posters.

- a helmet equipped with a chin strap
- protective goggles
- a high visibility vest
- ear defenders or ear plugs (over 85 dB).



Image 6 Visitors' PPE



4.9 Access control

Suosiola power plant is surrounded by a fence, and access to the area requires a permit. The contractors' Valtti cards can be updated with a specific form (Appendix 7), sent to the following address: operaatto-rit@avarnsecurity.fi. The application must be filled in and submitted three days before arrival at the area.

Every entry and exit through the gate is registered. The contractors use Valtti cards and the records are made to the Megaflex system, while the Esmikko system is used for the personnel and partners. After an access permit has been applied for, the Valtti cards are updated for the worksite by Avarn through the Megaflex system. Applicants must have a valid Occupational Safety Card/Pass and a hot work licence if they are to carry out any hot work.

Access to the area is through either a revolving gate for people or a vehicle gate. CCTV recording is in use both at the gates and the entire power plant area. Access through the vehicle gate on foot is not permitted, and no passengers apart from the driver are allowed to go through the vehicle gate onboard vehicles. Instead, passengers must enter the worksite as pedestrians through the revolving gate.

Access permits require a valid company ID badge and a completed access control form (Appendix 7 to the agreement). Additionally, the applicant must complete the Safety and Environmental Manual induction in the Priima system. A link to the induction can be found on the website <https://www.neve.fi/contractors>

The access control at the heating plants and movement around the heating plants must be negotiated with the contact person responsible for a specific plant.

4.10 Work permits

A service provider or supplier agrees to comply with Neve's work permit procedure. A risk assessment must always be carried out for work classed as hazardous, and a written work permit must be applied for. All contractors entering the area must submit a written and up-to-date plan to Neve on the identification and management of risks and hazards before commencing the work. Work permit must be visible at the worksite.

The following types of work require a permit:

- demanding lifting, working at height, work involving a risk of falling
- hot work (including ATEX areas)
- working inside tanks and silos
- electrical work
- work involving scaffolding
- detonations
- handling and transportation of hazardous and/or flammable chemicals.

The parties that grant work permits when a permit granted by a person from Neve is required are specified in the subchapters pertaining to each theme.

- Permits for hot work: Subchapter 6.3.1
- Approval of lifting plans: Subchapter 7.2.1
- Permits for tank and silo work: Subchapter 8.1
- Permits for electrical work: Subchapter 10.1.



Regularly repeated work that is carried out at Neve's site, is always the same and is deemed to involve only minor risks may be performed based on written work instructions and a task-specific hazard assessment. A written agreement between Neve and a contractor, service provider or supplier is required for the practical aspects and work that falls under this category.

Neve and the contractor, service provider or supplier are obliged to notify each other if the conditions and/or operations change in a way that a previous assessment no longer reflects the current operations.

Neve may also extend the procedure to cover other tasks. Furthermore, Neve may include areas where hazardous work is conducted in the category that requires a risk assessment and/or work permit, even when not required by the contractor's, service provider's or supplier's tasks.

The plans and schedules of tasks that require a work permit must be communicated to Neve well in advance.

4.11 Demolition

Before demolition work the contractor must submit a written plan for demolition work. Plan must include order of demolition, temporary supports, required fall protection, isolating and locking the energy sources, and other required actions needed to manage the risks of the demolition work. Plan also includes management of the environmental hazards such as noise and dust control measures.

Before starting any demolition work must be ensured that any electrical, gas, steam or other pipes, cables and tanks, that might cause a safety hazard are cut, closed, reliably emptied and washed if required.

4.12 Hole covers

Holes larger than foot must be covered always when being open. It is not required for the work. Smaller holes must be covered if something can fall through it, and hit someone on the lower floors, it causes a tripping hazard, or it causes hazard to lifting- or other equipment.

If hole covers are used, it must be marked with visible red cross. Hole covers must be secured to the floor to prevent it from moving. Hole covers must withstand 150 kg of weight.

If hole diameter or side is over 1 meter. Hole must be protected with railing and skirting board.

4.13 Vehicles

The contractors' car park is located outside of the gate, on the gate's right side, and all cars must be parked there. The driving arrangements and car parks at Suosiola power plant have been marked on the sitemap. All driving routes and traffic rules must be adhered to. The speed limit at Suosiola power plant is 30 km/h. Speed readings are taken in the area by Neve or a party authorised by Neve. The roads and other passages must be kept unobstructed for the rescue services, and the transfer of machines and equipment.

Equipment and tools may be transported by vehicles to the work locations with a special access pass, which can be applied for from specifically assigned persons from Neve or its representative. Once the equipment has been dropped off, the cars must be driven to the car park mentioned above.

No vehicles may be driven in the area without a driving permit granted by Neve. A permit is personal to the holder. All vehicles and work machines used for work in the area must have the following:

- motor liability insurance



- a first aid kit
- a fire extinguisher
- work machines and maintenance vehicles must have a reversing alarm and flashing warning lights on the roof and bumper.

The vehicles' and work machines' extinguishers must be inspected annually by an authorised extinguisher inspector.

4.14 Dust

4.14.1 Quartz dust

The Government Decree on Combating the Risk of Occupational Cancer (1267/2019) entered into force at the beginning of 2020. Silica dust, which is typically present in siliceous construction dust, has been classed as carcinogenic since the beginning of 2020. Siliceous products include concrete, mortar and clay. The maximum amount of silica is 0.1 mg/m^3 for an exposure time of eight hours. A contractor/partner must register its employees with the ASA register of exposed workers.

If there is a chance that employees will be exposed to quartz dust, the contractor must assess the risk factors and risks posed by siliceous dust in writing, and submit the risk assessment to Neve before commencing the work.

If exposure to siliceous dust cannot be reliably assessed, occupational sanitation measurements must be taken or the scale of the exposure must be compared to measurements taken during similar work. Additionally, a dust suppression plan is required, and it must include the following:

- information about the work phases that may generate siliceous dust
- the dust suppression measures taken
- the dust suppression methods used in the machines and work equipment
- the compartmentalisations carried out and their need
- the cleaning methods utilised to clean the surfaces and equipment
- the PPE used and the method to keep them clean
- the cleaning method for workwear
- instructions for taking dust measurements
- the induction received by the employees.

If exposure to silica dust is possible, the dust suppression plan must be submitted to Neve before commencing the work.

4.14.2 Wood dust

The Government Decree on Combating the Risk of Occupational Cancer (1267/2019) defines work that involves exposure to hardwood dust as work that poses a risk of cancer. The concentration of hardwood known to be harmful (HTP value) is 2 mg/m^3 for eight hours of exposure. Since 17 January 2023, this amount has been binding. However, wood dust concentrations as low as $0.5\text{--}1 \text{ mg/m}^3$ are deemed to be harmful to health. At Neve's locations, all wood dust is considered to be hardwood dust when assessing the harmful effects to the employees.

If technical means of control, work arrangements and work methods are unable to reduce the employee exposure sufficiently, respirators may be used to protect against wood dust. In ordinary work, a half-mask



equipped with P2 filters is sufficient protection against wood dust. However, whenever the concentration of wood dust is great or work that requires a mask is carried out regularly for more than two hours a day, a full-face respirator equipped with a P3 filter or a respirator with a visor is recommended.

4.15 Fly ash

Suosiola's fly ash contains small amounts of heavy metals, such as chromium, nickel, copper, arsenic, lead and cadmium. Therefore, a respirator with at least a P3-level filter must be used when it comes to work, facilities and areas where exposure to fly ash may occur. More detailed information about fly ash and the PPE it requires can be found in the safety data sheet.

4.16 Working near work machines

Entering the work machines' danger zones unnecessarily must be avoided. However, if a work machine's danger zone has to be entered or if work must be carried out there, extreme care must be taken. Operators of earth moving machinery and excavators have a limited vision due to the blind spots caused by the machines' shape. The operator's ability to observe their surroundings is also affected by several other things. Therefore, pedestrians entering a work machine's operating area must ensure that the driver has spotted them.

- Machines may not be approached from behind or the sides.
- Before entering the danger zone, an eye contact must be established with the operator, confirmed with a nod or a wave of hand by both parties.

5 Preventing accidental startup

Suosiola power plant has areas where work requires a machine to be disconnected from the power source for maintenance. The majority of the machines at the power plant can be remotely switched on.

When disconnecting a machine from the power source, all the forms of energy must be taken into account, including electricity, hydraulics, pneumatics, stored mechanical energy and flowing material.

- Machines must be disconnected and locked by Neve's operating personnel.
- Everyone carrying out work adds their own lock to the lock hasp installed by the operating personnel.
- Neve's electricians will remove the fuses of a machine for maintenance.

For example, disconnection from a power source is done by locking the machine's safety switch with a personal lock, which has the name of the locker and their phone number written on a tag. In addition to that, Neve's electricians must remove the fuses of the machine in question.



Image 7 Disconnection from the power source and a sign warning of radiation

Disconnection from power is ensured with a startup attempt.

Once work has been completed, the person who completed the job removes their lock and notifies Neve's supervisor and operating personnel about the completion.

Radiation sources are closed and locked by Neve for maintenance. The party carrying out the work must verify the position of the radiation sources' closing mechanism before commencing work in a radiation hazard area, marked with radiation hazard signs. A work permit must take radiation sources into account.

Being closer than one metre from a radiation source unnecessarily must be avoided.

5.1 Dedicated heating plants and district heating pumping stations

Sites where the safety switches cannot be locked, the party carrying out work must put up a sign warning of unfinished work and turn the safety switch to the 0 position. The sign must state the employee's name and phone number.

6 Hot work plan

These hot work instructions describe the operating procedures and safety regulations that must be complied with during hot work. If necessary, a separate location-specific hot work monitoring plan must be created for extensive renovation and new construction sites. Neve's hot work plan must be followed when carrying out hot work.

If work cannot be carried out in accordance with this manual for some reason, the exceptional work method must be documented and a work permit must be acquired to use the method.

6.1 Hot work



Hot work includes tasks that generate sparks or use a live flame or other heat source and pose a fire hazard. For example, hot work includes gas and arc welding, gas and arc cutting, cutting and grinding metal with an angle grinder, which causes sparks, as well as work that uses a gas burner, other open flames or a heat gun. Special care and a systematic approach must be taken when doing hot work on a roof.

According to the new hot work licence policy, a so-called black card for carrying out hot work on a roof no longer exists, and instead everyone who has received a card according to the new legislation has a right to conduct this work and grant hot work permits for this work, based on Neve's requirements.

The soldering and pipe lining work carried out at the electric workshop does not require a hot work permit, but the individuals doing this work must hold valid hot work licences.

6.2 Hot work at the permanent hot work facilities

Suosiola power plant and Nivavaara heating plant have permanent hot work facilities in the workshop. The area is marked with a hot work location sign. External contractors may not use Suosiola power plant's permanent hot work facilities without permission from Neve's personnel.

The permanent hot work facilities form a specific area for carrying out hot work safely, and it is separated from its surroundings.

Hot work must be carried out at these permanent hot work facilities whenever possible and authorised by Neve. When doing hot work in these facilities, the safety requirements of the work method, work location and the environment must be observed. A person carrying out hot work will not need a hot work permit when working at the permanent hot work facilities. The permanent hot work facilities must be clearly identified.

6.3 Hot work at a temporary hot work location

Temporary hot work locations include all other facilities and areas that do not constitute the permanent hot work facilities described above. Hot work at these locations always requires a written hot work permit.

In order to get a hot work permit, a sufficiently extensive risk assessment must be done on all of the operations. The person granting the hot work permit, the person carrying out the hot work and the person guarding the work must have valid hot work licences. A hot work permit is granted for a specific day/week before the work begins, and the permits are always for a fixed period. The hot work plan created based on a risk assessment must always be followed when doing hot work. The first-response extinguishing equipment and the post-work monitoring period are determined in the hot work permit, which may be longer than required by the general hot work guidelines. Hot work may only be commenced once the hot worker and the hot work sentry have ensured that the safety measures required by the hot work permit have been taken.

Hot work is prohibited at locations with an explosive atmosphere (ATEX) without a specific work permit and a risk assessment.

ATEX locations include the following, for example:

- fuel stores
- gas bottle stores
- facilities specified as ATEX areas.



When selecting a temporary hot work place, the fact that Suosiola uses highly flammable sulphur pellets for burning must be taken into account. The sulphur pellet feeders are located in the plant's backyard, and the pellets are stored in a tarpaulin storage building. No hot work may be carried out near the pellet feeders or the storage place.

Neve's hot work plan must be followed when carrying out hot work. Before applying for a permit, the eligibility of an area for hot work must be verified. Hot work areas must be protected with fire retardant mats, screens or panels. Sparks may not fly from one level to another, and the plant's other structures may not be harmed.

The requirements for protecting cables, cable racks, control centres and all similar actuators are particularly strict.

The general binding guidelines for hot work:

- Clear away any flammable materials from the hot work area.
- If possible, wash the area with water in order to remove explosive dust.
- Use a fire blanket to carefully protect flammable materials that cannot be removed.
- Protect any openings in the structures with a fire blanket and block any cracks.
- Protect the flammable surfaces of the structures with a fire blanket.
- Prevent sparks and sprays from spreading to the environment, and thermal conduction within the structures.
- Always ensure that there are no flammable gases in the work space. If necessary, measure the gas concentration in the work space and air out the space before commencing work.
- Disconnecting fire alarms and the fire extinguishing system always requires a separate permit, and the fire department may need to be notified as well. Ensure that once the work has been completed the fire alarms are switched back on and the necessary notifications are issued.
- Ensure that sufficient first-response extinguishing equipment is available and test it, for example water hoses. Always pressurise them before commencing work.
- Once hot work has been completed, the control room or the individuals specified in the hot work permit must always be notified.
- You may not leave the hot work area until the notification that the work has been completed has been confirmed and you have been given permission to leave by the control room/supervisor.

If a contractor fails to comply with the safety guidelines or its obligations, Neve has a right to issue a sanction. Neve may also charge the contractor for any repairs, cleaning or property damage in full. If a contractor does not protect a work location properly, Neve has a right to charge the contractor for the repairs.

The minimum first-response extinguishing equipment that must be on site includes two category 43A 183B C (12 kg) portable extinguishers, one of which may be replaced with two category 27A 144B C (6 kg) portable extinguishers. The equipment must remain at the hot work location throughout the hot work and the post-work monitoring period.



6.3.1 Permits for hot work

Only the persons indicated in Table 1 may grant hot work permits at Suosiola power plant, Mustikkamaa fuel terminal and the heating plants.

Table 1 Persons authorised to grant hot work permits

Operating unit	Authorised person	Contact details
Suosiola power plant and dedicated heating plants	Esa Vesterinen	esa.vesterinen@neve.fi +358 (0)40 538 6831
	Henrik Haavikko	henrik.haavikko@neve.fi +358 (0)40 129 9810
	Jari Seipäjärvi (heating plants)	jari.seipajarvi@neve.fi +358 (0)40 820 4624
	Ismo Mattila	ismo.mattila@neve.fi +358 (0)40 185 1346
	Niko Mäkitalo	niko.makitalo@neve.fi +358 (0)40 537 7385

In Aitamaantaussuo, a contractor's hot work plan is used. The contractor's hot work plan must be submitted to Neve before hot work is carried out.

6.4 After hot work

Always ensure that fire alarms and extinguishing systems disconnected for hot work are switched back on and that the alarms and extinguishing systems are operating as required.

It is of the utmost importance to issue the required notifications about the reconnection of alarm systems. These notifications are to be submitted to the control room/persons appointed by Neve and to the fire department, if necessary.

The post-work guarding defined in the hot work permit must be carried out.

Afterwards, all protections are to be removed from the location and the area must be cleaned. The hot work permit holder is responsible for cleaning the work area.

6.5 Hot work guarding

A hot work plan must describe the hot work guarding arrangements. A person carrying out hot work may not serve as a hot work sentry during the work. While guarding hot work, the hot work area and its surroundings must be constantly monitored. A hot work sentry must be aware of the hazards caused by hot work. They must also be able to issue an emergency notification and use the first-response extinguishing equipment made available at the location. If necessary, a hot work sentry must suspend the hot work. A hot work sentry must have a valid hot work licence.

The hot work guarding must be arranged according to the review and assessment of hazards caused by hot work. Hot work must be guarded throughout the work, including breaks. After hot work, the guarding must be carried out according to the hot work permit. The guarding period duration is two hours after the hot work, unless otherwise stated in the hot work permit. The control room must be notified when the sentry leaves the site.



7 Lifting and work involving a risk of falling

These lifting work guidelines include the procedures and safety regulations that must be followed in lifting work. The guidelines are binding and apply to all parties working at the operating units of Neve Oy and its subsidiaries, the worksites and the group's other locations.

If work cannot be carried out in accordance with this manual for some reason, the exceptional work method must be documented and a work permit must be acquired to use the method.

7.1 Equipment requirements

The cranes, cherry pickers and lifting equipment must comply with valid official regulations and they must have the following:

- a label that shows the manufacturer's details, a CE marking and other required information
- a sign or a sticker that states the heaviest load allowed
- a declaration of conformity (or a copy thereof)
- a periodic inspection record (or a copy thereof)
- a loader crane must have an installation crane sticker.

7.2 Safety during lifting

The person in charge of lifting must ensure that everyone taking part in the lifting work has had adequate induction for the work, and has the professional qualifications to carry out the tasks. The area where the lifting and lowering take place, as well as the lifting route, must be unobstructed and safe. The lifting area must always be cordoned off with fences or safety bunting.

If an emergency access road must be closed due to lifting, the rescue department and Neve's contact person/control room must always be notified.

Always ensure before lifting that the load has been correctly attached to the crane and is balanced. Equipment that does not have a clear indication of the heaviest allowed load may not be used. Loads may never be lifted over a person.

Lifting equipment may only be used by individuals who have appropriate training for the equipment and a written authorisation from the employer. The person must know the regulations concerning lifting equipment.

A company-specific individual must be assigned for lifting work to be responsible for ensuring that the lifting of loads and people is planned and carried out safely.

All cranes and cherry pickers must undergo an assembly inspection, and a written record of the inspection must be created. All loads must have lifting eyes. If no eyes exist, the secure attachment of the load must be reliably verified so that the load will not be able to come loose under any circumstances. When lifting a load, it must always be ensured that it cannot drop accidentally.

7.2.1 Persons responsible for lifting

The persons responsible for lifting work at Neve Oy are shown in Table 2. Only these individuals may approve lifting plans.



Table 2 Persons responsible for lifting

Operating unit	Authorised person	Contact details
Suosiola power plant and dedicated heating plants	Lauri Reiman	lauri.reiman@neve.fi +358 (0)50 305 3776
	Esa Vesterinen	Esa.Vesterinen@neve.fi +358 (0)40 538 6831
	Henrik Haavikko	Henrik.Haavikko@neve.fi +358 (0)40 129 9810
	Ismo Mattila	ismo.mattila@neve.fi +358 (0)40 185 1346
	Niko Mäkitalo	niko.makitalo@neve.fi +358 (0)40 537 7385
	Jari Seipäjärvi (dedicated heating plants)	jari.seipajarvi@neve.fi +358 (0)40 820 4624

7.3 Demanding lifting

A separate written lifting plan is always required for demanding lifting work. A contractor's lifting plan and risk assessment must be approved by Neve's representative. Work may not begin before an approval has been granted and documented.

Demanding lifting work includes the following, for example:

- when more than one crane is used simultaneously to lift a load
- when lifting particularly heavy or large loads under difficult circumstances
- when carrying out lifting work in particularly hazardous environments, e.g. with power lines, processing industry pipelines or excavation trenches present
- when carrying out lifting work in road areas
- when carrying out any lifting determined to be difficult based on the hazard and risk assessment.

7.4 Ordinary lifting

A separate lifting plan is not required for ordinary lifting work. In ordinary lifting, safety must be ensured with a written hazard and risk assessment and by creating guidelines for lifting work of that type. Each lifting must be planned and discussed with all participants before commencing the work. The lifting plans and risk assessments must be presented to Neve before the work begins.

7.5 Lifting accessories

Lifting accessories include any parts or devices that are not permanently attached to the lifting equipment and are placed between the machine and the load, or onto the load in order to get a hold of it.

Lifting accessories must be stored in a way that prevents damage, breakage and exposure to corrosion. Damaged lifting accessories may not be used.

Lifting accessories must undergo periodic inspections at least once a year. Every inspected lifting accessory must be labelled with the annual inspection colour as proof of inspection. Lifting accessories may

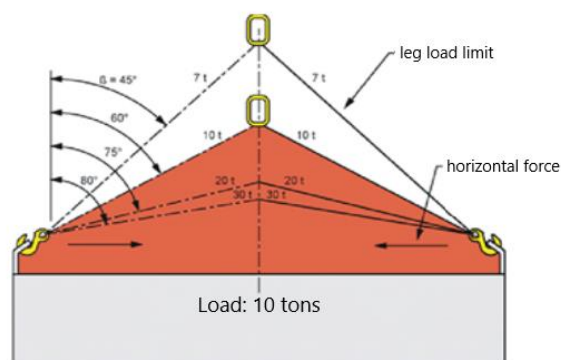
only be inspected by persons with qualifications specified in the Government Decree No 403/2008. Inspection records must be kept of the periodic inspections, and the documentation must be stored according to the norms.

The inspection colours for 2021–2025 are shown in Table 3.

Table 3 The inspection colours for lifting accessories

Year	Inspection colour
2021	White
2022	Green
2023	Orange
2024	Blue
2025	Yellow

Image 8 The allowed chain sling angles and their effects



Lifting accessories must always have the following:

- a CE marking
- information about the maximum load allowed
- the manufacturer's details
- information about the raw material, if this information is required for compatibility purposes
- the manufacturing date, if that has a bearing on the product's lifespan
- an inspection note, if the product has been in use for more than a year.

Image 9 illustrates the dimension guidelines for chain slings. The greatest allowed sling angle is 60° , which **may never be exceeded**. Image 10 displays the lifting accessory strength categories, working load limit (WLL) factors and chain sling angles.



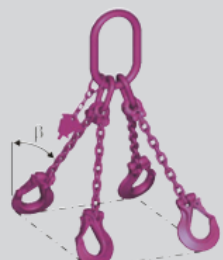

		1 leg	2 leg		3-4 leg	
						
Inclination angle: β		0	0-45°	> 45-60°	0-45°	> 45-60°
Form Factory		1,0	1,4	1,0	2,1	1,5
Chain diam.	Grade					
Ø 4	10 Grade (VIP)	0,63	0,88	0,63	1,32	0,95
Ø 6	8 Grade	1,12	1,6	1,12	2,36	1,7
	10 Grade (VIP)	1,5	2,1	1,5	3,15	2,25
	12 Grade (ICE)	1,8	2,5	1,8	3,75	2,7
Ø 8	8 Grade	2,0	2,8	2,0	4,25	3,0
	10 Grade (VIP)	2,5	3,5	2,5	5,25	3,75
	12 Grade (ICE)	3,0	4,25	3,0	6,3	4,5
Ø 10	8 Grade	3,15	4,25	3,15	6,7	4,75
	10 Grade (VIP)	4,0	5,6	4,0	8,4	6,0
	12 Grade (ICE)	5,0	7,1	5,0	10,6	7,5
Ø 13	8 Grade	5,3	7,5	5,3	11,2	8,0
	10 Grade (VIP)	6,7	9,5	6,7	14,0	10,0
	12 Grade (ICE)	8,0	11,2	8,0	17,0	11,8
Ø 16	8 Grade	8,0	11,2	8,0	17,0	11,8
	10 Grade (VIP)	10,0	14,0	10,0	21,0	15,0
	12 Grade (ICE)	12,5	17,0	12,5	26,5	19,0
Ø 18	8 Grade	10,0	14,0	10,0	21,2	15,0
Ø 20	10 Grade (VIP)	16,0	22,4	16,0	33,6	24,0
Ø 22	8 Grade	15,0	21,2	15,0	31,5	22,4
	10 Grade (VIP)	20,0	28,0	20,0	42,0	30,0
Ø 26	8 Grade	21,2	30,0	21,2	45,0	31,5
Ø 28	10 Grade (VIP)	31,5	45,0	31,5	67,0	47,5
 Attention: WLL * 0,5 when for asymmetrical lifts						

Image 9 The lifting accessory strength categories and chain sling angles

Image 11 illustrates the grounds for rejecting webbing slings. Webbing slings must be inspected before every use for any damage.

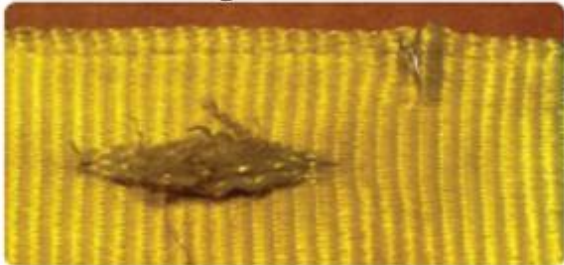
heat damage



unreadable label



webbing severed or slit



knots



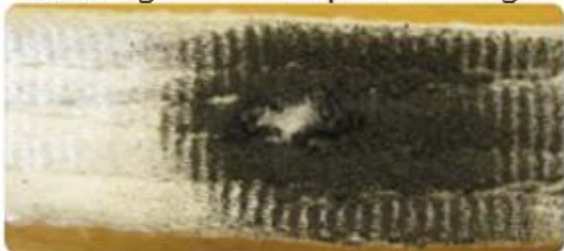
severed stitches



friction damage



welding or other spark damage



chemical damage

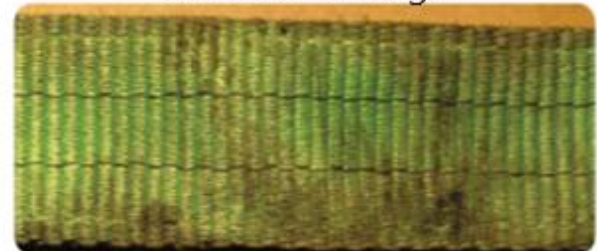


Image 10 Grounds for rejecting lifting accessories

Image 12 illustrates the grounds for rejecting round slings. Round slings must be inspected before every use for any faults or damage.

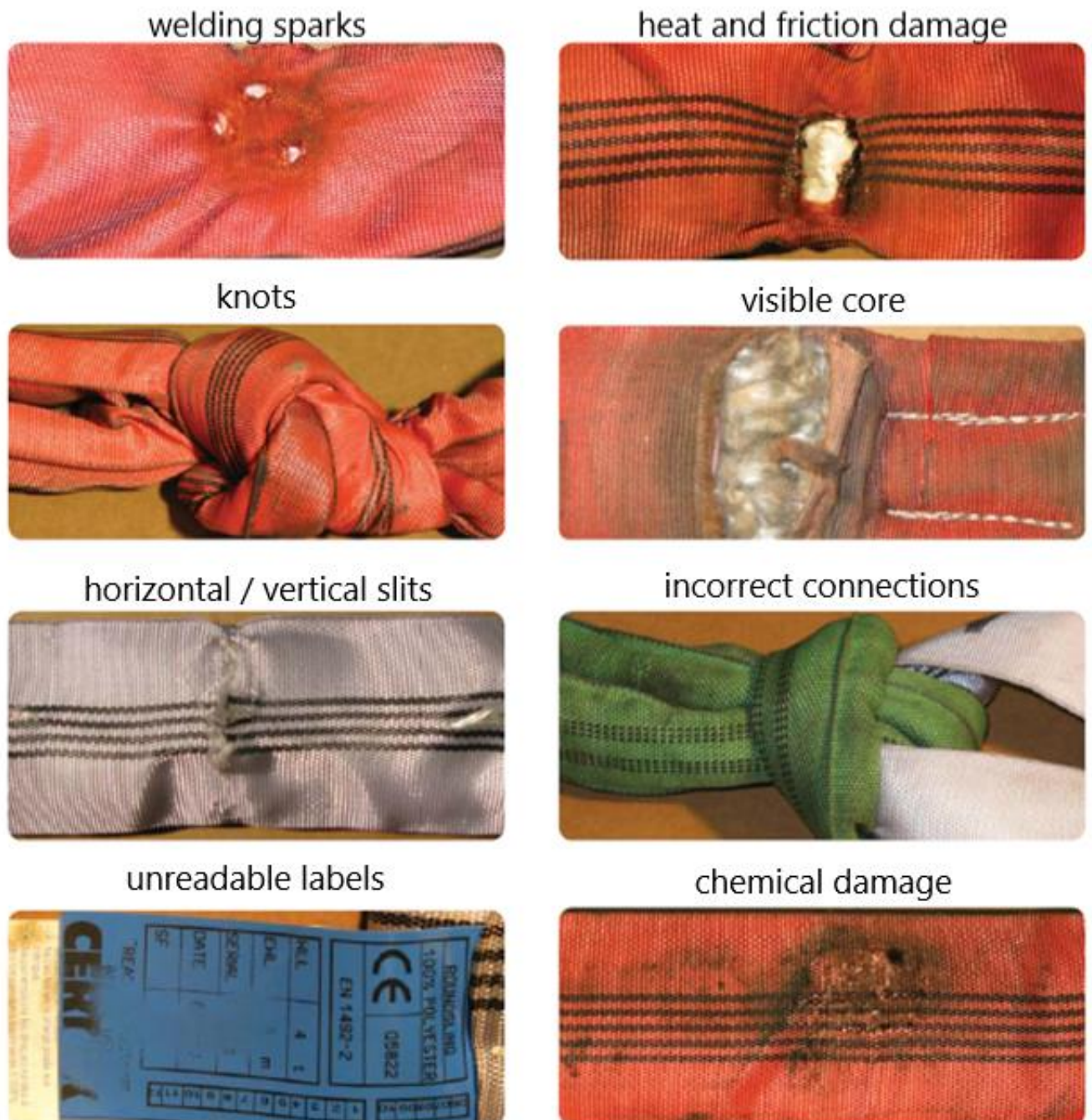


Image 11 Grounds for rejecting round slings



7.6 Lifting persons using forklifts and securing loads

Whenever lifting persons, the work must be carefully planned. This type of work must comply with the Government Decree No 403/2008, and only approved equipment that has been inspected may be used. Persons may only be lifted with cherry pickers, i.e. aerial work platforms, and temporarily with a loader crane, in accordance with Chapter 3 a, Section 25 of the Government Decree No 403/2008.

The platform must be reliably secured to the crane or forklift. The platform must have a label indicating the maximum allowed load and number of people. It must also have marked attachment points for personal fall protection. While working on a platform, a safety harness that is secured to the specifically designed attachment point must be worn.

If the operator and the person working on the platform do not always have an adequate visual contact with each other, the contact must be ensured with communication devices. No other load may be lifted with the crane or forklift while lifting people. However, an employee working on the platform may have their personal work equipment and supplies with them if they do not pose a safety risk to the lifting.

The use of a cherry picker's platform as a passageway is prohibited, and the platform may not be exited while it is in the air. All work must be carried out while on the platform floor and climbing on the guard rails is not allowed.

The use of a cherry picker and/or forklift requires that the user has a written authorisation from the employer to use a cherry picker and/or forklift (Government Decree 403/2008). A permit is personal to the holder. The contractors may grant permission to their own employees to use cherry pickers and/or forklifts.

With the amendment to the Government Decree No 1095/2019 that entered into force on 1 March 2020, employees who attach loads to cranes intended for installation use must have their employer's written authorisation to do so. Before an authorisation can be granted, the employer must verify that the employee has sufficient abilities and skills to attach a load, based on their training or prior work experience.

An employer's authorisation is always required when a load is attached to an installation crane with the intention of lifting and transporting the load within a worksite. Cranes intended for installation work primarily include tower and mobile cranes. Other cranes that have an adequate performance level and have been designed and manufactured for installation use may also be used as installation cranes. However, this requirement does not apply to instances in which a vehicle that is bringing in a load to the worksite on a temporary basis is being unloaded into the worksite storage with a loader crane installed to the vehicle, even if the worksite's employees are helping with the task.

The user must be provided with sufficient induction on the safe operation of the machine, and a commissioning and assembly inspection must always be conducted on the lifting machinery before the work begins. Records must be kept of these inspections. Ensuring that the ground is solid and the pads underneath the support legs are large enough is mandatory when assembling a lifting machine.

Make sure that no tanks, sewers, or other similar elements that reduce safety are located below the lifting machine's support legs. Users must carry out an inspection every day before commencing work, ensuring that all the essential functions and safety equipment function properly. In particular, the emergency stop function must be verified daily before the work begins.



When working on a cherry picker's platform, the forces generated by the work must be factored in (e.g. strong pulling forces). During demolition work, the demolition waste may result in dangerous overloading if any of the demolished structures collapse or fall onto the cherry picker. To remove the hazard of falling objects, the area below the platform must be fenced off, if necessary, or access to the danger zone must be prevented in some other way that is sufficiently effective.

Roads and traffic routes in yard areas require the presence of an escort vehicle, as stated in the Road Safety guidelines. Furthermore, the operators must have valid Road Safety 1 cards, while persons who plan and make traffic arrangements must have Road Safety 2 cards.

7.7 Work at height

Work platforms, access routes, vehicles/work machinery and scaffolding must be equipped with guard rails whenever a fall height exceeds two metres. A rail is also mandatory for lower access and work platforms if required for safe working.

Fall protection must be worn at all times:

- whenever working higher than at two metres or in places involving a risk of falling
- when working on a roof, if no safety rails have been installed
- when working on a cherry picker.

7.8 Platforms and stepladders (A-frame ladders)

The maximum height of an A-frame ladder is two metres, and it must be equipped with a horizontal bottom support. An A-frame ladder may not be used for work that involves the use of high-power tools or poses a risk of fire or the ladder falling over. An A-frame ladder may only be used on a flat and non-sinking base.

The maximum height of straight ladders is six metres. They may only be used to attach or detach lifting slings. Otherwise, working from a straight ladder is prohibited.

General guidelines on platforms:

- The work surface of a platform must be lockable, so that it cannot open during use.
- A platform must have steps with a minimum depth of 50 mm.
- The gap between steps may not exceed 300 mm.

General guidelines on stepladders:

- Attaching a work surface to a stepladder is an insufficient means of locking the ladder; instead, the ladder must be locked with a horizontal joint/metal stopper.
- The steps of a stepladder must be at least 50 mm in depth.
- When carrying out work that requires force or involves a fire hazard (e.g. breaking up concrete or welding), a stepladder must meet the stability requirements of a platform (Government Decree No 205/2009, Appendix 6) regardless of the work surface height.
- When it comes to the features that stepladders are required to have, the deciding factor is the height of the work surface, not the surface where work is taking place at a given time.

SAFE WORK PLATFORMS AND STEPLADDERS (A-FRAME LADDERS)

WORK PLATFORM

TYÖTASON KORKEUS

0 – 100 cm	101 – 150 cm	151 – 200 cm
-Steps to work platform from both sides when the height of the platform is < 50 cm	-Safeguard on top of work platform is mandatory	

STEPLADDERS, "A-FRAME LADDERS"

WORK SURFACES HEIGHT

0 – 100 cm	101 – 150 cm	151 – 200 cm
-Safeguard on top of work platform is mandatory -May not be used for work that involves the use of force or in hot work unless meeting requirements of Government decree no. 205/2009 Appendix 6.	-Safeguard on top of work platform is mandatory	-Safeguard on top of work platform is mandatory. -Handrails mandatory.

Stepladders over 1 m in height must meet the stability requirements of a platform (Government decree no. 205/2009 Appendix 6).

General guidelines on platforms:

- The work surface of a platform must be lockable, so that it cannot open during use.
- A platform must have steps with a minimum depth of 50 mm.
- The gap between steps may not exceed 300 mm.

General guidelines on stepladders

- Attaching a work surface to a stepladder is an insufficient means of locking the ladder; instead, the ladder must be locked with a horizontal joint/metal stopper.
- The steps of a stepladder must be at least 50 mm in depth.
- When carrying out work that requires force or involves a fire hazard (e.g. breaking up concrete or welding), a stepladder must meet the stability requirements of a platform (Government Decree No 205/2009, Appendix 6) regardless of the work surface height.
- When it comes to the features that stepladders are required to have, the deciding factor is the height of the work surface, not the surface where work is taking place at a given time.

Image 12 Platforms and ladders

7.9 Manual lifting

The work equipment must typically be arranged so that manual lifting or transfers are not required but replaced by technical solutions. However, if manual lifting must be carried out at a work location, the risk assessment and employee induction must take that into account.

No heavy loads are to be carried by hand; instead, transfer equipment must be used wherever possible. When lifting a load by hand, it is preferable to lift several smaller loads than one large and heavy one. When lifting things manually, avoid lifting from the floor level or above the shoulder level.

8 Working inside enclosed spaces

When working inside tanks, silos, channels or tight spaces, a tank work permit is required and Neve's guidelines on tank work must be adhered to. Before work in a tank begins, the foreman must study the tank environment and verify which controls and protective measures are necessary. The foreman must fill in a tank work permit form.

Tank work may not commence until it has been verified that all the controls and protective measures stated in the tank work permit form are in place. Adequate ventilation must be ensured or pressure equipment used while the work is ongoing in order to guarantee safe working conditions inside the tank.

All tools used inside a tank must be suitable for the work. Once the work has been completed, the tank's cleanliness must be ensured. A dirty tank will cause disruptions to the process and potential danger to people because of a fire or a failure of the tank.



Image 13 A fuel silo

Before entering a silo and commencing work, the gas concentrations must be verified by measuring them and adequate ventilation must be guaranteed. During the work, the employee must have a gas measuring device. Before entering a tank, all the radiation sources of the silo's radiometric surface measurements must be closed.

Whenever work is carried out inside a tank, a hatch sentry is required to be outside to monitor and maintain a constant contact with the people inside the tank. The person on guard duty may not suspend their monitoring duties or leave while work is ongoing inside the tank. The sentry must be able to call for help at all times. They must also be able to take immediate emergency action in accordance with the tank work permit. The persons listed in Table 4 are authorised to grant tank and silo work permits.



8.1 Permits for tank and silo work

Table 4 lists the persons authorised to grant permits for tank and silo work at Suosiola power plant and the dedicated heating plants.

Table 4 Persons authorised to grant permits for tank and silo work

Operating unit	Authorised person	Contact details
Suosiola power plant and dedicated heating plants	Esa Vesterinen	Esa.Vesterinen@neve.fi +358 (0)40 538 6831
	Henrik Haavikko	Henrik.Haavikko@neve.fi +358 (0)40 129 9810
	Lauri Reiman	Lauri.Reiman@neve.fi +358 (0)50 305 3776
	Jari Seipäjäarvi (dedicated heating plants)	jari.seipajarvi@neve.fi +358 (0)40 820 4624
	Ismo Mattila	ismo.mattila@neve.fi +358 (0)40 185 1346
	Niko Mäkitalo	niko.makitalo@neve.fi +358 (0)40 537 7385

9 Work involving scaffolding

When assembling, using, or disassembling scaffolding, the existing guidelines and plans must always be adhered to. In addition to that, the changing conditions at the worksite must be considered.

The assembly location must be made level, compacted and, if necessary, reinforced with gravel or some other highly supportive level of material.

Scaffolding is assembled and constructed according to the scaffolding user manual or the structural and operational plan. Work scaffolding is always erected in such an order that prevents the employees from falling down, or this risk must be removed some other way. Scaffolding must be stiffened by using horizontal and diagonal slings.

The width of the work surfaces of a scaffolding must be:

- 0.6 m when the scaffolding is only used for working on
- 1.2 m when the scaffolding is used for work and storing materials used in the work
- 1.8 m when the scaffolding is used for work, storing materials used in the work and carting materials, for example for masonry work.

All work platforms taller than 0.5 metres must be equipped with access platforms.



All scaffolding must be inspected every seven days. Scaffolding in use must always display tags that indicate:

- the party in possession of the scaffolding
- the scaffolding's assembly date
- the party who assembled the scaffolding
- the size of the scaffolding
- the scaffolding's load-bearing capacity
- the inspection dates and name of the inspector.

The use of incomplete and otherwise unsuitable scaffolding must be prevented with a label or through some other means.



Image 14 A scaffolding tag

10 Electrical work/Strong electrical currents and magnetic fields

Electrical installations may only be done by electricians with appropriate qualifications. Additionally, the work requires an installation/inspection authorisation.

- Never pull or lift an electrical device by the cord.
- Check that the plug and socket are clean and intact before connecting them.
- When moving portable electrical devices in wet or damp spaces, you must first disconnect them.
- Extension cables' connectors must be kept clean.
- An extension cable must be unreeled fully before connecting a device.
- Vehicles may not be driven over cables or hoses. If you must do so, use a so-called cable bridge.
- Cables that run across access routes must either be lifted up to run along the ceiling or attached to the floor and marked in order to prevent a tripping hazard.

The power plant has areas with strong electrical currents and magnetic fields. If you have a pacemaker or some other health-related constraint, please notify the personnel and avoid these areas.

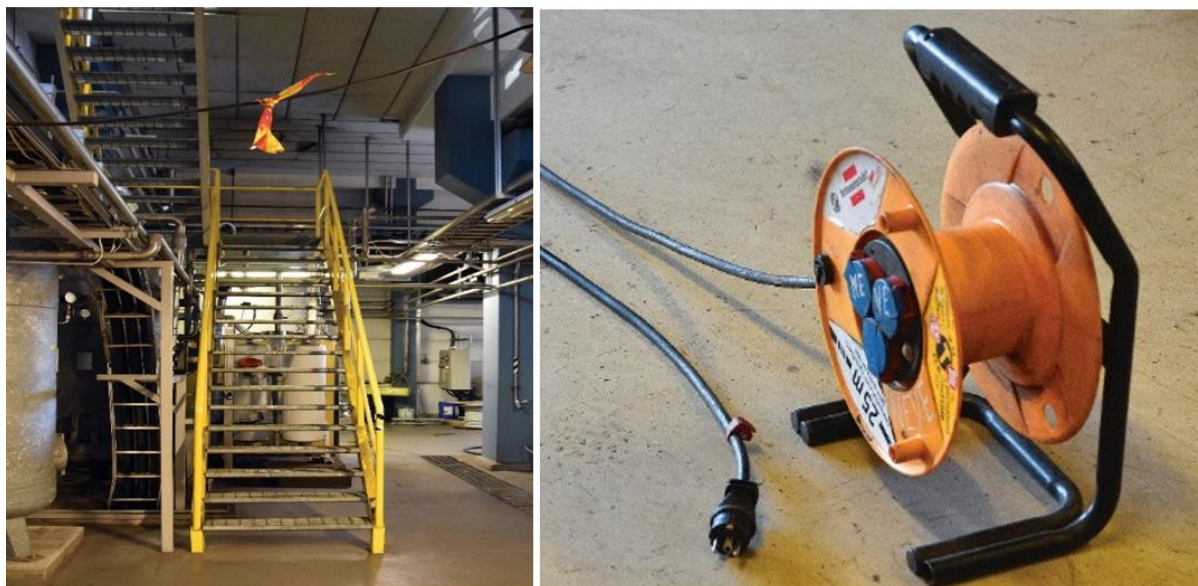


Image 15 Electrical cables

10.1 Permits for electrical work

Table 5 lists the persons authorised to grant permits for electrical work at Suosiola power plant, Mustikkamaa fuel terminal and the dedicated heating plants.

Table 5 Persons authorised to grant electrical work permits

Operating unit	Authorised person	Contact details
Suosiola power plant, Mustikkamaa fuel terminal and the dedicated heating plants	Miika Kourunen	miika.kourunen@neve.fi +358 (0)40 563 1576
	Erkki Pietilä	erkki.pietila@neve.fi +358 (0)40 828 3957

11 Radiation sources

Suosiola power plant has several radiation sources in use in various applications. These are known as sealed radioactive sources. In addition to that, the X-ray machine used in Suosiola's ash granulation facilities requires a radiation safety permit. The handheld X-ray machine is called an XRF analyser. Neve Oy has a total of 27 sealed radioactive sources, 23 of which are located at Suosiola power plant, two at Muurola heating plant and two at Nivavaara heating plant.

The use of radioactive devices requires a permit at all times, and those taking part in their use must be trained for the task. Additionally, the individuals must have completed general radiation safety training.

Ionising radiation causes harm to the body, if the exposure to strong radiation is long-term in nature. Radioactivity can only be detected with a radiation detector intended to measure radiation, available from the

rescue services, among other places. Suosiola power plant has three radiation detectors: one in the control room, one in the electrical repair workshop and one with the radiation safety officer.

All radiation sources are labelled with a radiation hazard sign. Continuously working or staying closer than one metre (1 m) from a sealed radioactive source is prohibited. The silo doors and other facilities involving a radiation hazard are equipped with radiation hazard signs. Always close the radiation source before entering the silo.

Radiation hazard is indicated with a triangle-shaped warning sign with the symbol of the radiation in question in the middle. The background of the sign is yellow. The borders and symbol are black. Image 17 contains examples of warning signs.



Image 16 Radiation hazard warning signs

Any damage that has occurred to the sealed radioactive sources, installation work, repairs or maintenance, a fire, or a fault or defect in the XRF analyser must always be reported to the radiation safety officer, production manager or the Radiation and Nuclear Safety Authority (STUK). The contact details can be found in Chapter 16.

The regulations and guidelines of STUK are available at <https://www.stuklex.fi/en>, and STUK's recommended Radiation Safety Guides are located at <https://www.stuklex.fi/en/st-ohje>.

11.1 In case of an accident

If a serious accident occurs, contact the Radiation and Nuclear Safety Authority (STUK). If a person has been exposed or may have been exposed to radiation, they must be taken to see a doctor. However, action must be taken to avoid the spread of any radioactive substance (so-called contamination risk) by ensuring that the person exposed to radiation washes and their clothes are disposed of.

The order of steps to take in case of an accident is listed below:

1. Rescue people.
2. Put out the fire (if a fire has broken out).
3. Minimise the time spent near the source (the amount of radiation will remain small).
4. Maximise the distance to the source (the radiation intensity is inversely proportional to the square of the distance).
5. Prevent further damage (isolate the area and do not spread any radioactive substance, e.g. with your shoes).
6. Provide guidance to others if you are familiar with safety matters.
7. Notify the radiation safety officer.
8. Take measurements, make conclusions and report the incident.



11.2 Operational and maintenance tasks

Always lock (OFF/CLOSED) a radiation source before going between the source and the detector, for example inside a fuel silo. During normal operation, there is a radiation lobe between the source and the detector, meaning that the source is open (ON/OPEN). All radiation sources unnecessary to the production machinery must always be closed and locked at the start of maintenance outages by the staff members of Neve Oy.

Always close the radiation sources (OFF/CLOSED) for repairs and maintenance. During the installation, transport and storage of the sources, their closing mechanisms must also be kept closed (OFF/CLOSED). The employee carrying out repairs is obligated to check the position of the closing mechanism.

Keep all devices safe so that they do not pose a danger to people and/or property. The XRF device will only radiate while it is in use and connected to a power source. If you suspect the device is faulty, disconnect it from the power source. If you think that the device is not working properly or you are unsure about the procedure, contact the radiation safety officer. Keep all the warning signs clean and in good condition.

While a tank is empty but running, the radiation near the radiometric measuring device (detector) is more intense than background radiation. Being unnecessarily in the immediate vicinity of the detector should be avoided.

11.3 Radiation hazard during imaging

Maintenance and repairs at the power plant may involve radiography, for example in the form of X-ray and isotope imaging of welded seams. The imaging is carried out by an external organisation, but the plant's own personnel must be aware of the radiation hazard area. The area must be marked with warning signs, illustrated in image 17.

When carrying out an open installation job, the surroundings of the imaging device must be cordoned off with bunting (yellow bunting marked with the words SÄTEILYVAARA – RADIATION) or booms into a control area exposed to primary radiation or scattered radiation (Radiation Safety Guide 5.6). Entering an area that has been cordoned off without permission is prohibited. The external organisation carrying out an imaging is obligated to control access to the restricted area while imaging is taking place.

The control room must always be notified of any X-ray and isotope imaging carried out at the power plants. The notification should preferably be done a day ahead to allow ample time to make preparations for the imaging and notify the personnel working in the area.

12 Environmental guidelines

12.1 Chemicals

The safety data sheets of the chemicals stored at Neve's and Aurora Lämpö Oy's energy generation sites are kept in Priima. A contractor may receive credentials to Priima's chemical archives, if that is deemed to be necessary. The chemical safety cards of the most frequently used and dangerous chemicals are available in the place of their use/storage, and the cards include information about the hazardous features, the necessary PPE and procedures in case of dangerous incidents for each chemical.



The storage and regular use of chemicals at Neve's facilities must be negotiated with Neve in advance. A list of these chemicals and their safety data sheets must be submitted to Neve before bringing the chemicals to the power plant area. The safety data sheets for chemicals that are used occasionally at Neve's facilities must be presented on request.

The safety data sheets must be adhered to when transporting, handling and using chemicals. The work machines must have response equipment for any oil spills (e.g. absorbent mats) and inspected first-response extinguishing equipment.

The collection point for waste chemicals at Suosiola is located in the backyard, in a separate tank.

Flammable liquids, gasses and lubricating oils may not be stored indoors for long term. Instead, the required storage areas must be placed outside in locked units with canopies, made from non-combustible building materials, for example in the storage area next to the repair workshop. Signs with appropriate symbols must be placed outside of the storage units. Gas bottles must be kept upright and supported in the storage units.

Any loose gas bottles used for work must be placed in a gas bottle trolley or tied to a fixed structure (column). Furthermore, gas bottles used in work vehicles must be reliably secured.

If an oil, chemical or fuel leak occurs, it must be immediately reported to the control room or Neve's representative, and an environmental observation must be recorded in Priima.

12.2 Transfer documents

At energy production sites where Lassila & Tikanoja handle the waste management, electronic transfer documents are available via the Oma L&T service and Lassila & Tikanoja will submit the necessary information to the register of the Finnish Environment Institute (SYKE).

12.2.1 Obligation to draw up a transfer document

According to Section 121 of the Waste Act (646/2011), the holder of waste must create a transfer document for the waste types listed below:

- hazardous waste
- septic tank and cesspool sludge
- sludge in sand and grease interceptors
- contaminated soil
- construction and demolition waste (other than uncontaminated soil)
- POP waste, i.e. waste containing organic substances (a new requirement).

A transfer document is not required for:

- municipal waste
- biodegradable waste such as sticks, leaves and grass clippings
- fly ash and grate ash
- moulding and boring sand
- waste that requires special treatment but is not generated through construction/demolition and is not hazardous
- waste that is used for energy production but is not generated through construction/demolition.



A transfer document must include all the necessary information about the waste for monitoring and tracking purposes, including the type, quality, volume, origin, delivery location and date, processing method at the delivery location and the driver.

12.2.2 Procedure for using transfer documents

Transfer documents must be created using electronic formats. The information in the documents must be machine readable (a scanned paper version does not constitute an electronic transfer document). A transfer document must be readable during the waste transfers, and the information contained in the document must be available to all parties taking part in the transfer. The party in possession of the waste must confirm the accuracy of the information presented in the transfer document, the driver must confirm that they have picked up the waste, and the recipient of the waste must confirm the receipt with an electronic signature, an electronic stamp or some other reliable electronic verification method. The waste holder and recipient must store the transfer document information for three years after the end of the transfer.

Transfer documents can be in paper format if the conditions for electronic documents are not met (e.g. if the operator is small and makes few transfer documents). The waste holder must ensure that paper transfer documents travel with the waste during its transfer and are handed over to the waste recipient once the transfer is complete.

The statutory archiving time of transfer documents is three years. Neve uses a shared email address, siirtoasiakirjat@neve.fi, for the submission of transfer documents, and contractors may be asked to submit all their transfer documents to this address. A right to use this email address is granted via the Service Desk. Transfer documents will remain in the emails for three years.

12.2.3 Submitting transfer document information to the register

From 1 September 2022 onwards, the waste holder that compiles a transfer document must ensure that the transfer document information is submitted to the SIIRTO records, maintained by SYKE. The information must be submitted without undue delay via a technical interface. Information in paper transfer documents must be submitted to the register within three months of the end of the transfer via e-services.

In practice, information on waste delivered to L&T and Residuum is transferred to the register via these operators' electronic transfer document system.

12.3 Waste management

All waste generated through the work must be sorted and stored in the designated place only. Waste must be immediately removed from a work location, so that it cannot cause a danger to the employees or the environment.

According to legislation, waste holders must verify that the waste collector and transporter have been approved and recorded in the waste management register, and that the approval also covers the transportation of the waste in question. If a service provider or supplier handles the waste management internally, the notification of the approval to the register must be submitted to Neve before commencing the work.

According to the Government Decree on Waste (978/2021), which entered into force in 2021, construction and demolition waste must be collected separately. A party undertaking a construction project (Neve



or main contractor, if responsibility has been transferred over to the latter with an agreement) must ensure that the project is planned and carried out in a way that allows for useable building parts and materials to be collected and reused, and ensures that as little and harmless construction and demolition waste as possible is generated as a result of the operations (Section 25).

The holder of construction and demolition waste must arrange a separate collection for at least the following types of waste (Section 26):

1. concrete, brick, mineral slabs and ceramics that are sorted, if possible, according to waste type
2. asphalt
3. bitumen and roof felt
4. gypsum
5. unimpregnated wood
6. metal
7. glass
8. plastic
9. paper and cardboard
10. mineral wool insulation
11. soil and rock.

New waste types included in the special collection are asphalt, bitumen, roof felt and mineral wool insulation (glass wool and rock wool).

At the energy production sites, Neve usually arranges the general waste-specific skips and containers necessary for sorting waste.

The service providers and suppliers must handle any demolition waste, in accordance with their agreements, and have it removed at their expense.

A contractor must arrange waste recycling appropriately and draw up transfer documents for the required waste types. The transfer documents must usually be in electronic form, as stated in Subchapter 12.4. A contractor must submit all the transfer documents created for waste to Neve immediately after the waste transfer. The statutory archiving time of transfer documents is three years.

Among others, the waste collection points include the following:

- metal: clear and black separately
- hazardous substances (oils, chemicals)
- electrical and electronic waste (SER)
- cardboard, paper, organic waste, landfill waste, waste suitable for burning, waste wood, glass, mixed waste and packaging plastic.

The amount of dust generated during waste handling and demolition work must be minimised, and the residual dust must be adequately removed through a dust removal process, while ensuring that the dust does not cause harm to the other employees.

All operators are responsible for ensuring that the worksite, barracks and common areas remain clean and tidy. All access ways, staircases and the yard area must be kept clean. All service providers and suppliers must maintain an organised and tidy working environment every day. The work duties include a cleanup of the work area immediately after the work, sorting the waste and excess supplies in compliance with the Waste Act and removing or transferring them from the workplace to a location designated by Neve.

The area in front of the first-response extinguishing equipment, first aid points and switchboards, as well as emergency access roads and fuel distribution points, must be kept free of objects and vehicles.



Image 17 A waste sorting point



Image 18 Hazardous waste



13 Sanctions

One written warning will be issued to an employee for a breach of safety. If a second breach occurs, the employee will be instructed to leave the worksite or work location, in addition to which the contractor, contracted service provider or supplier will be issued a sanction charge as follows:

- **A mild breach** (e.g. an incorrectly parked car in the area or noncompliance with the general guidelines)
 - one written notice; a sanction of €1,000 for the second time
- **A serious breach** or wilful negligence (e.g. noncompliance with the occupational safety guidelines or smoking outside of the designated area)
 - one written notice; a sanction of €2,000 for the second time
- **A gross breach** (e.g. being in the plant area while under the influence)
 - removal from the area, a sanction of €3,000 and a ban for the area for a period determined on a case-by-case basis.

Neve has a right to remove an employee from the worksite/work location due to neglect regarding PPE or some other safety requirement. If the same contractor's employees repeatedly neglect to use PPE, Neve may issue a sanction according to the breach.

Smoking outside of the designated area, a missing piece of PPE and any other actions contrary to this manual constitute a breach of safety. The sanctions are sent directly to the contractor, contracted service provider or supplier whose employee has not complied with the manual.

A warning or a removal from the worksite/work location can be ordered by Neve's representative and a safety coordinator represented by Neve. Sanctions may be issued by Neve's representative.



14 Accidents and emergencies

If an accident occurs, call 112 for help

You must also contact the control room: +358 (0)40 761 9930

If you see an accident or notice a hazard

- Report the accident or ask someone else to report it.
- Warn others in the area of the danger.
 - Cordon off the area.
 - Prevent further accidents.
- The beginnings of a fire
 - Ensure no current is running through the device or vehicle.
 - Trigger the extinguishing system.
 - Try to do initial extinguishing.
- In case of a fire or other need for evacuation (e.g. a chemical accident)
 - If the warning lights are flashing or the fire alarm is sounding, go to the assembly point immediately.
 - Ensure that your colleagues have been informed.
 - Arrange guidance for the fire department.
 - Do not put yourself in danger!
- Injured people
 - Assess the situation.
 - Move the injured person(s) away from the danger zone.

Assess the following in order to provide emergency first aid:

- Is the person conscious or not?
- Is the person breathing normally and are their airways open?
- If necessary, turn the person onto their side into a recovery position and make sure that they are getting enough oxygen by opening their airways.
- Avoid moving the patient otherwise, if you do not know the nature of their injury.
- Is the circulation normal? The circulation is adequate if the person is clearly conscious, their hands feel warm and their colour is normal.
- If the person is not breathing or no pulse can be detected, start the compressions: 30 compressions followed by two rescue breaths.
- Is there any visible bleeding, and does the person show symptoms of an impending shock?
 - Bandage up any wounds, if necessary. Try to put pressure on the wound to stop the bleeding.



15 Contact details

CONTROL ROOM: +358 (0)40 7619 930

The persons assigned for special areas of responsibility at each production plant are listed in Table 6.

Table 6 The special areas of responsibility at the production plants

Responsibility	Name	Phone number
Safety coordinator	Niko Mäkitalo	+358 (0)40 537 7385
Electrical operations manager	Erkki Pietilä	+358 (0)40 828 3957
Electrical work manager	Erkki Pietilä	+358 (0)40 828 3957
Radiation safety officer	Erkki Pietilä	+358 (0)40 828 3957
Manager for pressure equipment operations	Jukka Partanen	+358 (0)50 325 7320
Deputy manager for pressure equipment operations	Aki Leppänen	+358 (0)50 591 4134
Control room		+358 (0)40 761 9930



Table 7 Contact details for Suosiola's personnel

Name	Role	Phone number
Jukka Partanen	Production manager, operation manager	+358 (0)50 325 7320
Lauri Reiman	Operation manager	+358 (0)50 305 3776
Miika Kourunen	Electrical automation manager	+358 (0)40 563 1576
Jari Suhonen	Electrical automation engineer	+358 (0)40 751 4617
Erkki Pietilä	Electrical and automation operation manager	+358 (0)40 828 3957
Esa Vesterinen	Operation and maintenance manager	+358 (0)40 538 6831
Henrik Haavikko	Operation engineer	+358 (0)40 129 9810
Niko Mäkitalo	Operation and maintenance engineer	+358 (0)40 537 7385
Ismo Mattila	Power plant engineer	+358 (0)40 185 1346
Marko Alanampa	Automation technician	+358 (0)40 772 0331
Juha Laukkanen	Automation technician	+358 (0)40 550 4796
Toni Soudunsaari	Operation and maintenance technician	+358 (0)40 849 4415
Tero Hintikka	Operation and maintenance technician	+358 (0)40 510 8925
Tommi Niemi	Operation and maintenance technician	+358 (0)40 610 8499
Rauno Mursu	Operation and maintenance technician	+358 (0)40 729 8925
Kari Kangas	Operation and maintenance technician	+358 (0)40 547 5099
Juha Lohela	Operation and maintenance technician	+358 (0)40 831 3514
Mirko Jokinen	Operation and maintenance technician	+358 (0)40 530 7019
Ari Takkunen	Fuel officer	+358 (0)400 915 155
Jari Seipäjärvi	Senior operation and maintenance technician, dedicated heating plants	+358 (0)40 820 4624
Anne Strandman	ESG Specialist	+358 (0)40 701 9939
Niko Kuivala	Safety / security specialist	+358 (0)40 182 7784



16 GDPR

Neve and the service provider or supplier agree to comply with the applicable EU and national legislation concerning the processing of personal information and data protection in their operations. Both parties must ensure for their part that personal information is handled according to good information processing practices and the legislation that applies to the party in question.

The way in which personal information may be processed between Neve and the service provider or supplier has been determined in Appendix 1.1. Data protection (Safety appendix to the agreement).

Good to know:

- First aid kits and toilets at site huts.
- First aid kits at workshops, control room, boiler house and sampling stations
- Emergency showers at chemical stations
- Stretchers at 2nd floor hallway
- Portable fire extinguishers and fire hydrants in every floor at boiler house.
- Control room & offices, from main door to 4th floor.
- Walking paths to main door
- One-way road
- Two-way road
- Material deliveries

