

INSTRUCTIONS

IN CASE OF RADIATION HAZARD

These instructions provide information on actions in case of an emergency occurring at Loviisa power plant requiring public protection measures. An emergency of this kind is highly improbable, but still possible.

In case of an imminent radiation hazard, the authorities will issue instructions to the population, for example, on sheltering indoors, taking iodine tablets and evacuation. These measurements are designed to prevent direct health hazards and minimise the impact of radiation.

Pursuant to the Decree of the Finnish Ministry of the Interior (YVL 774/2011) on communication of information in a radiation hazard situation, these instructions for action are distributed to population in the vicinity of the power plant every three years.

ALWAYS ACT ACCORDING TO THE FOLLOWING INSTRUCTIONS IF YOU HEAR THE PUBLIC WARNING SIGNAL

The public warning signal is a one-minute long rising and falling sound signal sounded with public warning sirens. The signal is played in case of an imminent severe danger to people.



1. Go and stay indoors. Close doors, windows and air vents and shut down ventilation. Remember to turn off forced ventilation. For more information, go to page 3, Sheltering indoors.

2. Turn on the radio and/or television. Public notices can be heard/seen on national broadcast channels. Instructions issued by the authorities are shown on YLE text-TV pages 112 and 867-868. Further information regarding a radiation incident is provided also on the websites and Twitter accounts of Itä-Uusimaa Rescue Department, Fortum and the Radiation and Nuclear Safety Authority of Finland (STUK):
- www.iupela.fi / @IUPELA
- www.stuk.fi / @STUK_FI
- www.fortum.fi/loviisa/ @FortumNuclear

Public emergency warnings are also sent via the 112 Suomi app. For more information, go to page 3, Following public announcements.

3. Avoid unnecessary communications (use of Internet, messaging and calling) so as not to block the important communication lines of the authorities.

If implementation of protection measures is ordered by the authorities, the following instructions must absolutely be followed.

4. Shelter indoors, stay indoors.

5. Only take an iodine tablet if instructed to do so by the authorities. Do not go outdoors to get iodine tablets, if you do not have any. For more information, go to page 3, Iodine tablets.

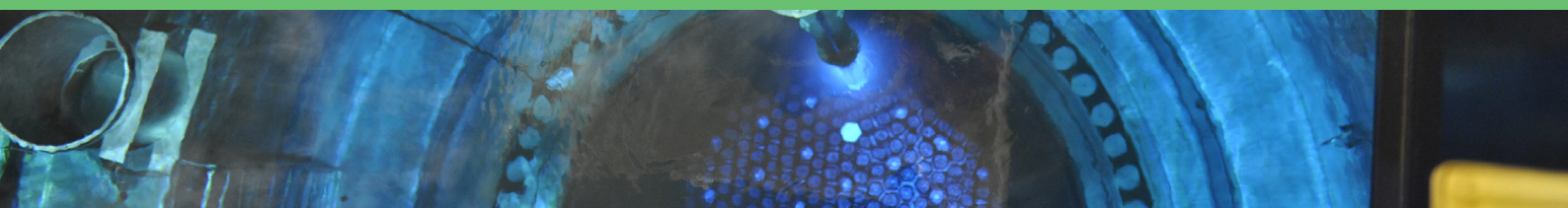
6. Evacuation refers to the temporary move of people from the danger area to a safe location. In case of the authorities issuing an evacuation order, follow the instructions exactly. In case of an evacuation, always take with you
- necessary medications
- hygiene items
- means of payment
- proof of identity, ID card.

In an evacuation situation, leave everything at your home like you would when going on a vacation. Report out when you leave and report in when you arrive at your destination. For more information, go to page 3, Evacuation.

7. Do not leave the area of your own volition unless instructed to do so by the authorities, to avoid potential risks on the way.

The all clear signal is a one-minute long continuous steady sound signal indicating there is no longer any threat or hazard.

INSTRUCTIONS IN CASE OF RADIATION HAZARD



RADIOACTIVITY AND RADIATION

There are small concentrations of radioactive substances in our daily living environment: the soil, construction materials, water, air and our own body. These and the background radiation from space are called natural radiation.

Some of the dose received by people is caused by the beneficial use of radiation, for example for medical purposes.

HEALTH EFFECTS OF RADIATION

Exposure to the ionising radiation of radioactive substances increases the risk of adverse effects on health. The risk of cancer caused by radiation is small even after exposure to a large dose of radiation.

Any cancerous tumours only appear many years after the exposure and it is usually not possible to link a specific tumour to any specific case of exposure. Symptoms caused by radiation, such

as nausea and diarrhoea, are only seen soon after the exposure in cases where people are exposed to large doses of radiation within a short period of time.

The adverse effects of radiation on health can be estimated on the basis of the radiation dose. Radiation doses are usually measured in millisieverts [mSv].

All unnecessary exposure to radiation must be avoided. The higher the radiation dose a person is exposed to, the higher the probability of adverse effects on health.

AUTHORITIES ARE IN CHARGE OF ACTIONS IN CASE OF AN INCIDENT

Safety and the environmental radiation levels are under constant surveillance. In case of an imminent radiation hazard, the authorities will communicate about the hazard and issue instructions to the population on sheltering indoors, taking iodine tablets and evacuation. The authorities also give instructions on the protection of agricultural production and feed to prevent the contamination of the food produced.

The purpose of the protection measures is to prevent direct health hazards and minimise the impact of radiation.

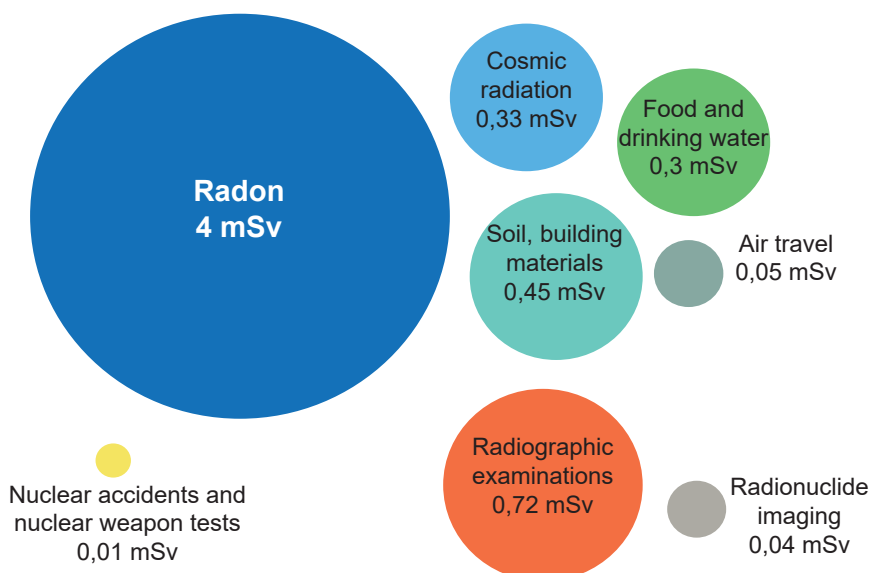
RADIATION HAZARD

The normal operations of the Loviisa power plant do not subject people or the environment to danger.

A radiation hazard may occur in a nuclear plant accident where radioactive substances are released to the air or seawater in an uncontrolled way.

This means that people may be exposed to radiation through radioactive substances travelling in the air, or substances that have landed in the environment, or substances that have ended up in the body through breathing contaminated air or eating contaminated food.

FINNISH PEOPLE RECEIVE ON AVERAGE RADIATION DOSE OF 5,9 mSv PER YEAR



INSTRUCTIONS IN CASE OF RADIATION HAZARD



SHELTERING INDOORS

Residential buildings provide good protection in case of a radiation incident. Try to seal the space as well as possible. Close doors, windows and air vents, and shut down ventilation. This way you will reduce the amount of radioactive particles and gases migrating into the building. Protect food products by packing them in e.g., dust-tight plastic bags or containers.

Tap water will not be contaminated. Refrigerators, freezers and tight packaging protect against radioactive dust.

The walls, roofs and intermediate floors of the building attenuate radiation, which means that the centre part of the building and the basement are the best places in terms of protection. Avoid staying in rooms with large windows.

The maximum period of time to shelter indoors is two days. Some radioactive substances may gain access inside even in sealed buildings. Once the radioactive cloud has passed, follow the instructions of the authorities on required actions.

If it is absolutely necessary to go outdoors, wear a respirator and clothing that covers your skin as completely as possible and is easy to clean, such as rainwear. When returning indoors, leave your outdoor clothes at the entrance and wash up carefully. This will help prevent radioactive substances from reaching the skin and the indoor areas.

On farms, livestock is to be taken inside and provided with clean feed to minimise the contamination of products of animal origin, such as milk. Enough feed shall be reserved for production animals for a few days' consumption. Stored feed must be protected against fallout.

IODINE TABLETS

Radioactive iodine may be released into outdoor air in case of a nuclear power plant accident. Iodine tablets provide protection by preventing the accumulation of radioactive iodine in the thyroid. Iodine

tablets do not protect against other radioactive substances. Iodine tablets are freely available for purchase at pharmacies. It is advisable to always have them ready for use. Taking iodine tablets is particularly important for children and pregnant women, because the thyroid glands of children and fetuses are more sensitive to radiation than the thyroids of adults.

Only take an iodine table when the authorities recommend it. If taken too early or too late, the iodine tablets are not as effective. Read the instructions provided on the package leaflet and follow them.

Do not go outdoors to obtain iodine tablets if the public warning signal has been sounded or the authorities have given instructions by some other means to stay indoors. The amount of iodine intake through inhaling is also reduced by sheltering indoors.

FOLLOWING PUBLIC ANNOUNCEMENTS

Follow the instructions broadcasted on radio, television and online media of the authorities. Instructions can also be found on YLE text-TV pages 112 and 867-868.

Public emergency warnings are also sent to your phone if you have installed the 112 Suomi app, allowed the app to share your location data and enabled the tracking of the app. This will allow you to receive the warnings also in a location where the public warning signal is not audible. The 112 Suomi app also makes it easier to report an emergency by telephone, as it shows the location of the caller. The app provides instructions for different types of incidents. You can find more information about the features of the 112 Suomi app online at www.112.fi/112-suomi-application. The app can be downloaded free of charge from app stores.

EVACUATION

In case the authorities assess that sheltering indoors is not enough, they can order the population to temporarily evacuate the danger area. Only take the necessary items with you (e.g., necessary medications, hygiene items, means of payment, proof of identity, etc.). Do not take more than you can easily carry, i.e., no large suitcases or similar.

Turn off ventilation. Otherwise leave everything at your home like you would when going on a long trip. On farms, livestock and feed are to be left indoors for their protection. Follow the instructions issued by the authorities.

The aim is to implement evacuation before the arrival of the radioactive cloud, if there is enough time for it. If there is no time, evacuation will not take place until after the cloud has passed the area. Shelter indoors, when the cloud is near your area.

The authorities will provide more detailed instructions on evacuation via radio, television and online media. The majority of the population is expected to evacuate the danger area in private cars. Decisions on transport arrangements, a safe direction, destination and any assembly points are made according to the specific situation. If necessary, shared transport and special transport will be arranged by the authorities in charge of the rescue operations.

Follow carefully all instructions issued regarding evacuation. Report out when you leave and report in when you arrive at your destination. Do not leave the route specified in the instructions.

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EMERGENCY RESPONSE AND RESCUE OPERATIONS

The planning of rescue operations as well as the implementation of operation during accidents and incidents are carried out by governmental, regional and municipal authorities, institutions and other entities under the leadership of rescue service authorities to ensure the effectiveness of rescue operations.

Protection measures that may be necessary in case of a radiation incident are implemented by, for example, the rescue services, police, food authorities, social services, health services, Border Guard, Sea Guard, the Ministry of the Interior, agricultural authorities, the Radiation and Nuclear Safety Authority of Finland, and the Finnish Broadcasting Company. If necessary, the Finnish Defence Forces can be requested to provide assistance. The authorities may also order other operators to participate in the operations, such as transport firms and accommodation providers. The Rescue Department has prepared an external rescue plan in case of a radiation incident. Fortum has prepared its own emergency response plan in case of a radiation accident occurring at the Loviisa power plant.

The authorities and other operators involved in

rescue operations regularly exercise the actions defined in the rescue plan and maintain their emergency response capabilities at all times.

INSTRUCTIONS DISTRIBUTED WITHIN EMERGENCY PLANNING ZONE

According to the decision of the Government of Finland and the Decree of the Finnish Ministry of the Interior, the nuclear power plants, in cooperation with the Rescue Department and the Radiation and Nuclear Safety Authority of Finland, shall at intervals of three years provide the population in the area near the plant with instructions for action in case of a radiation hazard.

The instructions have been distributed to homes and workplaces within the area of the Town of Loviisa and Municipality of Pyhtää. The instructions for action are also posted on the websites of Fortum. Owners of a secondary residence in the area have received the instructions by post to their primary address and are advised to take the instructions to their secondary residence.

FURTHER INFORMATION:

Itä-Uusimaa Rescue Department

Fortum, Loviisa NPP

The Radiation and Nuclear Safety Authority

www.iupela.fi

www.fortum.com/loviisa

www.stuk.fi

 @IUPELA

 @Fortum_Oyj @FortumNuclear

 @STUK_FI