

Information for the General Public in the Vicinity of the Cattenom Nuclear Power Plant



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www.add.rlp.de

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Forward

Dear fellow citizens,

The horror scenario following the Chernobyl nuclear disaster in April 1986 clearly showed us how quickly radioactive hazards can occur, cross national borders and threaten large parts of Europe. While no nuclear power plants are in service in Rhineland-Palatinate, some that are located close to our border, such as the one in Cattenom, France, give particular cause for concern.

The Rhineland-Palatinate Supervisory and Service Directorate (Aufsichts- und Dienstleistungsdirektion – ADD) is the disaster management authority responsible for dealing with the situation that may arise in the event of an accident. A wide range of authorities are drawing up plans to provide assistance to the public in such an event. In order to be prepared for all eventualities, however unlikely they may be, the Supervisory and Service Directorate has drawn up emergency plans. An important aim of crisis preparation is to inform the public in advance so people clearly know what to do in an emergency. This brochure is designed to help you prepare for potential situations and inform you about the right steps to take. Protective measures cannot undo large-scale radioactive contamination, but they can considerably reduce the possible consequences. It is important to remember that "knowledge is power", especially in the field of radiation protection. The aim of this guide is to highlight the different protection options in the event of accidents at nuclear power plants.

Thomas Linnertz

President of the Supervisory and Services Directorate (Aufsichts- und Dienstleistungsdirektion)

The Cattenom Nuclear Power Plant

The Cattenom Nuclear Power Plant is located in the French department of Moselle, approximately 2.5 km north-west of the municipality of Cattenom. It belongs to the French group Electricité de France (EDF). The Cattenom Nuclear Power Plant consists of four pressurised water reactor blocks. Each of these blocks produces some 1,300 megawatts (MW) of electricity.

Pressurised water reactors (PWRs) are light water reactors and differ from other reactor types in that they have two separate water loops: Primary and secondary loops (see Figure 1). In PWRs, heat is generated by nuclear fission and transferred to the surrounding coolant (primary loop) in the reactor pressure vessel. The secondary water loop generates steam which is fed directly to the turbines. The turbines are directly coupled to the generator, thereby converting the generated thermal energy into electrical energy.

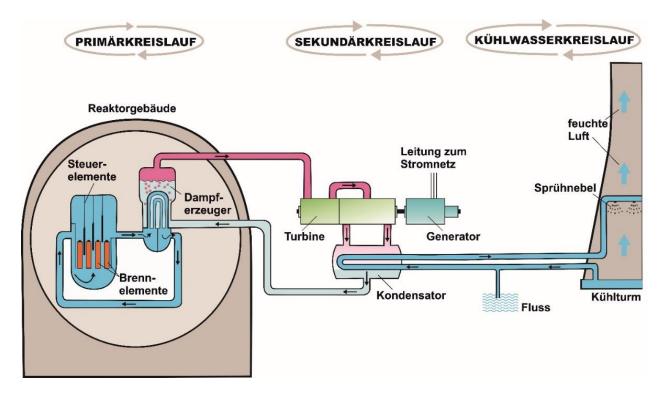


Figure 1: How a pressurised water reactor works

Primärkreislauf	Primary loop
Sekundärkreislauf	Secondary loop

Kühlwasserkreislauf	Coolant loop
Rektorgebäude	Containment structure
Steuerelemente	Control rods
Dampferzeuger	Steam generator
Brennelemente	Fuel rods
Turbine	Turbine
Kondensator	Condenser
Generator	Generator
Leitung zum Stromnetz	Cable to the electricity grid
Fluss	River
Kühlturm	Cooling tower
Sprühnebel	Spray mist
Feuchte Luft	Moist air

What can happen?

Although German and French nuclear power plants have safety equipment and preplanned measures in place which virtually rule out the occurrence of an accident that may result in radiological consequences for the surrounding area, a residual risk still exists. Such an event sequence can only occur if the existing, multi-layered safety measures are ineffective and the additional measures for preventing severe core damage and containing its radiological consequences are unsuccessful.

Accidents involving the spread of radioactive material – most recently in 2011 in Fukushima, Japan, or in 1986 in Chernobyl, Ukraine – highlight the risks of this technology. An accident would cause the environment, human beings, animals and plants to be exposed to radiation.

We differentiate between:

1. External irradiation

- caused by the passing radioactive "cloud" (in the first hours or days after an accident)
- caused by the radioactive substances deposited on the ground from the radioactive "cloud" (after the "cloud" has passed)
- 2. Internal irradiation
 - caused by inhaling radioactive particles from the air (from the "cloud")
 - caused by eating contaminated food (after the "cloud" has passed)

These different radiation exposure scenarios are illustrated in Figure 2 below. The release of radiation, referred to here as a "cloud", is colourless, odourless and there-fore imperceptible to humans. However, it can be detected by using appropriate meas-uring devices.

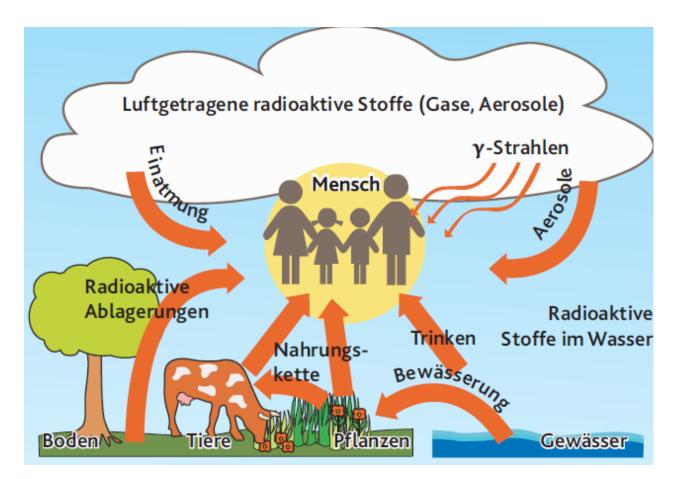


Figure 2: Exposure of humans, animals and plants to radiation as a consequence of an accident

Luftgetragene radioaktive Stoffe (Gase, Aerosole)	Airborne radioactive substances (gases, aerosols)
Einatmung	Inhalation
Mensch	Humans
γ-Stahlen	γ rays
Aerosole	Aerosols
Radioaktive Ablagerungen	Radioactive deposits
Nahrungskette	Food chain
Trinken	Drinking
Bewässerung	Irrigation
Radioaktive Stoffe im Wasser	Radioactive substances in water
Boden	Soil
Tiere	Animals
Pflanzen	Plants
Gewässer	Water bodies

What are the effects of radiation?

Radioactive substances continuously decay into other substances, emitting highenergy radiation in the process. This radiation can alter or destroy body cells, posing a serious risk to health if many such cells are affected.

A distinction is made between acute and delayed sickness:

Acute radiation sickness occurs after a just few days of exposure to very high levels of radiation and can lead to severe or even incurable physical injuries.

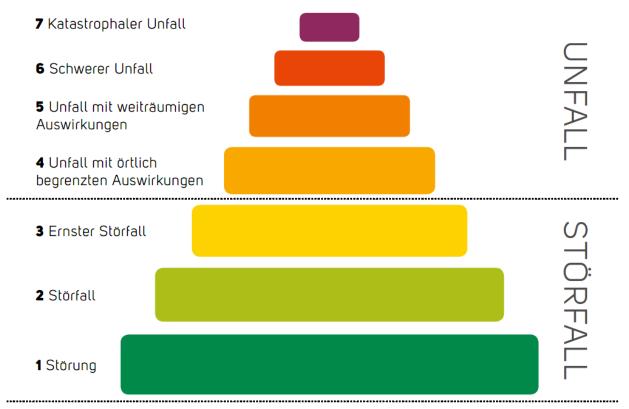
Delayed radiation sickness often appears after years or decades following much smaller levels of exposure to radiation; in particular, the incidence of cancer and malformations in new-borns can increase.

The protective measures planned for Rhineland-Palatinate are intended to prevent the population from suffering acute radiation sickness. This should minimise possible delayed effects.

The INES Scale

The International Nuclear Event Scale (INES) is used to rate the severity of accidents. It was developed by the International Atomic Energy Agency (IAEA), a scientific and technical organisation of the United Nations (UN).

The INES Scale (see Figure 3) is intended to make the safety significance of nuclear and radiological events more transparent and easier for the public to understand. Events of major safety significance are rated at seven levels - from level 1 (anomaly) to level 7 (major accident). Events below the scale – i.e. that have only low or no safety significance – are given the additional rating of 0.



0 Unterhalb der Skala/Stufe O – keine sicherheitstechnische Bedeutung

Figure 3: INES Scale

Unfall	Accident
Störfall	Incident

7 Katastrophaler Unfall	Major accident
6 Schwerer Unfall	Serious accident
5 Unfall mit weiträumigen Auswirkungen	Accident with wider consequences
4 Unfall mit örtlich begrenzten Auswir- kungen	Accident with local consequences
3 Ernster Störfall	Serious incident
2 Störfall	Incident
1 Sörung	Anomaly
0 Unterhalb der Skala/Stufe 0 – keine sicherheitstechnische Bedeutung	Events below the scale/rating 0 – no safety significance

Information on disaster management in Rhineland-Palatinate

In the event of an accident at the Cattenom Nuclear Power Plant, the Supervisory and Service Directorate and the district of Trier-Saarburg have drawn up disaster management plans. The Ministry of the Interior and Sport, the Ministry for Climate Protection, Environment, Energy and Mobility and the district administration of Trier-Saarburg were involved in this process.

The disaster management plan for the vicinity of nuclear facilities (German: KatS-Plan KKW) has the primary objective of preventing or limiting the direct effects of a nuclear accident on the public. Rhineland-Palatinate bases its planning on the standardised German framework recommendations for disaster management in the vicinity of nuclear facilities issued by the German Commission on Radiological Protection (SSK), which also apply to foreign nuclear power plants close to the border.

The area surrounding nuclear facilities is divided into the following zones for individual disaster management planning measures in accordance with the recommendation of the Commission on Radiological Protection published in 2015:

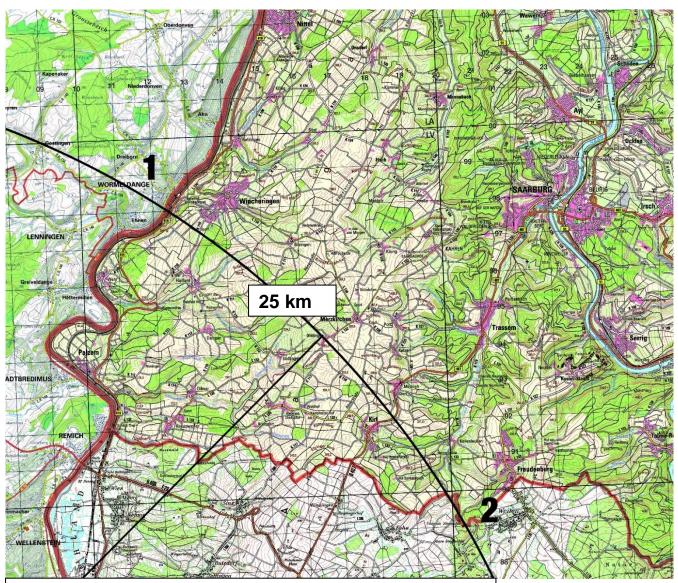
• **Central zone (Z):** immediate vicinity of the nuclear facility, its outer perimeter is a circle around the nuclear power plant with a radius of 5 km.

The central zone of the Cattenom Nuclear Power Plant is located exclusively on French territory, which means that corresponding measures for this zone are not planned in advance by Rhineland-Palatinate.

• **Middle zone (M):** encloses the central zone; its outer boundary is formed by a circle around the nuclear power plant with a radius of at least 20 km.

For the Cattenom Nuclear Power Plant, the radius of the central zone was set at 25 km in agreement with Saarland and Luxembourg. This was necessary to ensure that the city of Luxembourg is fully covered by the 25 km radius. Rhine-land-Palatinate and Saarland supported this decision in order to ensure stand-ardised disaster management planning across borders.

Part of the municipality of Saarburg-Kell is located in the central zone. For this area, measures to avert acute risks to the life and health of the public are planned in advance. In particular, these include the measures "instruction to stay inside", "distribution and intake of iodine tablets" and "evacuation".



Explanations:

Bold red line: National border with Luxembourg

Red line: State border with Saarland

The figures 1 and 2 indicate sectors as planning variables.

Data source: "©GeoBasis-DE/LVermGeoRP2011-06-07"

- Belgien Mayen-Koblenz A 100km 12 Rhein-Lahn-Kre Vulkaneifel Cochem-Zell Eifelkreis 1 Bitburg-Prüm Rhein-Hunsrück-Kreis Mair Bernkastel-Wittlich Bad Kreuznach 2 Birkenfeld Luxemburg TRIER Trier-Saarburg Μ Kusel Donne 25km aiserslautern Saarland KAISERSLAUTERN 3 **Explanations:** PIRMASENS Südwestpfal: A - outer zone M - central zone 4 Frankreich Data source: "©GeoBasis-DE/LVermGeoRP2011-06-07"
- **Outer zone (A):** encloses the central zone, its outer boundary is a circle around the nuclear power plant with a radius of 100 km.

Belgien	Belgium
Luxemburg	Luxembourg
Frankreich	France
Saarland	Saarland

• **Remaining territory** of the Federal Republic of Germany that is not assigned to any of the above zones.

Plans for the outer zone and the rest of Rhineland-Palatinate include "instructing people to stay inside", "distributing iodine tablets to all persons for whom an iodine blockade is to be provided, depending on their age group" and "warning the public not to consume freshly harvested food".

Assessment of the situation through radiation measurements

In order to be able to assess the radiological situation, measurements from the plant and the surrounding area are required. On the one hand, information on the emissions from the power plant and the meteorological conditions at the plant's site are required. On the other, measurements must be taken in the vicinity of the plant.

The following measurement options are available:

- 1. Permanent measuring stations maintained by the operator and the authorities
- 2. Direct mobile measurements
- 3. Mobile sampling
- 4. Laboratory measurements
- 5. Measurements by the German Meteorological Service (DWD) in conjunction with the Federal Office for Radiation Protection (BfS).

The Federal State uses measuring stations located near nuclear power plants as a special monitoring instrument. The local gamma dose rate is measured at these measuring stations. The measured values can be accessed via the Internet at: https://odlinfo.bfs.de.

Radiation measurement units of the State Office for the Environment (LfU) and the disaster management services (usually the fire brigade) are deployed to carry out mobile direct measurements and sampling.

Warning and informing the public

A release of radioactive substances begins at the earliest several hours after the damage has occurred at the nuclear power plant. Certain releases, e.g. as part of a filtered depressurisation, are not likely to occur for several days. During this time, safety measures can be taken to protect the public. The procedure for warning and informing the population of Rhineland-Palatinate in the event of danger is explained below.

To warn the public, the Federal Government uses the Modular Warning System (abbr.: **MoWaS)** – a powerful warning and communication system that offers a high degree of availability. The Rhineland-Palatinate disaster management authorities are connected to this system and can use it to issue warnings and recommendations for action to the public.

Various warning tools are connected to MoWaS, which is referred to as a so-called warning device mix. This mix of warning devices consists primarily of Cell Broadcast, alerting apps, radio, television, digital city billboards, etc. Sirens are also among the warning devices in Germany, but these are not connected to MoWaS. You can find all of our warning resources on the Federal Office of Civil Protection and Disaster Assistance (BBK) website.¹

The variety of warning devices increases the probability that people in Rhineland-Palatinate will be reached by a warning message. Moreover, the warning devices' functions complement each other. For example, a siren can draw peoples' attention to a warning, but it cannot inform citizens about important recommendations for action such as a message delivered by an alerting app or on the radio.

¹ https://www.bbk.bund.de/DE/Warnung-Vorsorge/Warnung-in-Deutschland/MoWaS/mowas_node.html

The warning devices:

Cell Broadcast

Cell Broadcast is a mobile phone service that was introduced on 23 February 2023 and can be used to send alerts directly to mobile phones or smartphones.

An app does not need to be installed and the system requires no advance settings. Cell Broadcast is the warning channel that can currently be used to reach the majority of people in Rhineland-Palatinate directly.

You can find further information on Cell Broadcast on the Federal Office of Civil Protection and Disaster Assistance (BBK) website².

Warning apps

NINA

The German Federal Government's Emergency Information and Warning App (Notfall-Informations- und Nachrichten-App – NINA) is linked to MoWaS and allows users to receive important alerts from the civil protection authorities for various hazardous situations.

Once the app has been installed, you should subscribe to areas and locations for which you would like to receive alerts, otherwise no warnings will be displayed. NINA also offers the option of receiving warnings for your current location.

In addition to displaying the alert on your mobile phone, you can also add notification sounds for the alert. This brings danger messages to your attention more quickly.

You can find further information on the NINA warning app on the Federal Office of Civil Protection and Disaster Assistance (BBK) website³.

²https://www.bbk.bund.de/DE/Warnung-Vorsorge/Warnung-in-Deutschland/So-werden-Sie-gewarnt/Cell-Broadcast/cell-broadcast_node.html

³ https://www.bbk.bund.de/DE/Warnung-Vorsorge/Warn-App-NINA/warn-app-nina_node.html

Other warning apps include:

- BIWAPP Bürger Info und Warnung (Citizen Info and Warning)
- KATWARN
- Various regional warning apps

Important information on warnings can be viewed again at any time in the warning apps. In the event of danger, the disaster management authorities also publish citizens' helpline telephone numbers and contact point and iodine tablet distribution centre addresses.

You should therefore continue to monitor your mobile phone or tablet, even if the warning messages are not constantly updated.

Radio and television

Radio and television also inform the public about the type of danger and recommendations for action. These types of warning devices are so-called transient media. This means that although dangers can be reported, transmitting more detailed information such as telephone numbers or addresses is more difficult, because the programmes are broadcast continuously.

Trans-regional German radio stations, national radio stations and a large number of local radio stations are connected to MoWaS. In terms of television, the state broad-casters and full nationwide programmes of public and private providers are connected (e.g. the ARD, ZDF, SWR channels etc.).

Radio announcements are broadcast particularly by the stations that also transmit traffic bulletins (e.g. SWR, RPR, etc.). The announcements are regularly updated and repeated as the situation unfolds.

Therefore, leave your radio on, even if you don't hear alerts immediately.

Digital city billboards

An increasing number of cities have digital city billboards that are connected to MoWaS. Should hazardous situations arise, the public in the affected area are warned on a case-by-case basis and offered a visual warning channel in addition to the wide range of acoustic alerts, thereby supplementing the warning device mix.

Social media

Social media platforms such as Instagram, X (formerly Twitter) and Facebook are also frequently used by various media organisations or authorities to disseminate warning information to the public. However, strict attention should be paid to the source of the content, as the risk of false information on these media channels is very high.

Sirens

Their volume allows sirens to attract attention over a large radius, which makes them generally suitable for alerting people to imminent danger, even when they are asleep. This is known as the "wake-up effect".

The siren signals are standardised throughout Germany.

Warnung: Einminütiger auf- und abschwellender Ton



Sirens for the wake-up function

(In all locations where siren systems are installed)One-minute, rising and falling tone for the warning. One-minute continuous tone for the all-clear.

Entwarnung: Einminütiger Dauerton

Warnung: Einminütiger auf- und ab- schwellender Ton	Warning: One-minute, rising and falling tone
Entwarnung: Einminütiger Dauerton	All-clear: One-minute continuous tone

In addition to the familiar siren tones, modern loudspeaker sirens can use voice announcements to emphasise a warning and also provide brief instructions for action.



The standardised national voice announcements and siren tones provided for this purpose are available on the Federal Office of Civil Protection and Disaster Assistance (BBK) portal⁴.

Following a siren warning, the public can obtain more detailed information about the danger and further recommendations for action from other sources such as radio, television, social media and alerting apps.

⁴ https://bks-portal.rlp.de/

Loudspeaker vans

The fire brigade, public order office and police often use loudspeaker vans to reach as many residents as possible in an affected area, for example if an area needs to be evacuated.

Warnings broadcast by loudspeaker vans are often used in addition to sirens, but are limited to the number of such vans available to the individual municipalities.

In parallel with the warning, the disaster management authorities initiate further measures for your protection as part of the alarm and deployment plans drawn up for the area surrounding the nuclear power plant. The responsible authorities have disaster management centres and qualified staff at their disposal for these tasks, as well as technical equipment that has been specially procured for such an event.

Where can I go in the event of an accident at the Cattenom Nuclear Power Plant?

The disaster management authorities (Supervisory and Service Directorate (ADD) and Trier-Saarburg district administration) will set up a citizens' hotline in the event of an accident at the Cattenom Nuclear Power Plant. The telephone number of the citizens' hotline is publicised in particular via radio (SWR, RPR), television (ARD, ZDF, SWR) and the Internet (www.add.rlp.de).

Only dial the emergency numbers 110 (police) and 112 (fire brigade) in emergencies. Please do not call these numbers or the civil protection authorities to obtain information; otherwise you will block these telephone lines from taking important emergency calls.

Rules of behaviour and protective measures

Stay inside!

Only go outside if it is absolutely necessary and return inside as quickly as possible.

The radioactive substances released during a nuclear emergency are mainly transported in the air. Staying inside offers considerable protection against radiation. This level of protection is based on two facts; namely

- the shielding effect of the buildings and
- the reduction of direct contact with radioactive substances.

Radiation is attenuated by walls, ceilings and the surrounding ground (cellar). Thicker walls offer greater protection. Cellars and internal rooms therefore offer the best protection against radiation. However, it is essential to ensure that cellar windows are tightly closed! In the event of an incident, cellar windows should be securely sealed with adhesive tape to provide optimum protection, especially for pregnant women.

Wooden houses, tents, caravans, mobile homes and cars offer little or no protection.

Close all windows and doors!

Closing windows and doors and switching off ventilation systems (also in energysaving houses, where appropriate) that draw in unfiltered air from outside largely prevents radioactive substances from entering the interior of the house and being deposited there.

These precautions considerably reduce the likelihood of inhaling radioactive substances. Furthermore, food stored openly in the house is protected from contamination.



Figure 4: Cellar rooms without windows provide the greatest protection

Zimmer mit offenem Fenster	Room with open window
Zimmer mit geschlossenem Fenster	Room with closed window
Keller mit Fenster	Cellar with window
Keller ohne Fenster	Cellar without window

Respiratory masks (protection class FFP3)

In the event of an incident, people will need to leave their homes for various reasons or only arrive home after radioactive dust or droplets (aerosols) have been deposited. Protection class FFP3 respiratory masks can protect users against ingesting these dusts or droplets into the body via the respiratory tract.

Do not wear contaminated clothing!

If you are informed by radio or loudspeaker announcements that radioactive substances have moved over the area where you are and that you may have been contaminated, we recommend the following:

- **Before entering the house**, remove any outer clothing and shoes worn outside the house. This is the only way you can prevent radioactive substances adhering to them from entering the house.
- You should then thoroughly wash your **head and hands first**, followed by other uncovered areas of your body, with running water, so that radioactive particles are rinsed off directly and do not spread across your body's surface.
- Only then is a shower recommended.

Do not harvest fruit or vegetables!

- Do not harvest fruit or vegetables at this time.
- Where possible, consume the food you have stocked at home.
- It is safe to drink tap water, as the waterworks are monitored and do not feed into the municipal water grid in the event of radioactive contamination.

What can you already do today?

Always ensure you have a stock of food sufficient for 14 days! The most important foodstuffs are listed in the information leaflet/guide "Disasters Alarm" published by the Federal Office of Civil Protection and Disaster Assistance (BBK).

Rules of behaviour and protective measures - brief overview

Depending on how the situation develops, your cooperation may be required for implementing protective measures. The most important rules of conduct that you should observe are summarised below.

- Turn your **radio** on! Don't forget to listen to the announcements broadcast by the authorities on the radio while you are inside. These will tell you how long you should adhere to the above recommendations.
- Please remain calm!
- To keep the telephone lines free, **do not call the emergency numbers** for the fire brigade (112) or the police (110)!
- Only make phone calls via the **mobile telephone networks in the most urgent cases**! Many helpers are dependent on mobile calls.
- Follow the instructions issued by the disaster management authorities!
- Close windows and doors tightly, switch off ventilation and air conditioning systems!
- If possible, seek out **cellar rooms** or internal rooms and ensure you have sufficient radio reception!
- Please also help others, especially your neighbours and fellow citizens who may struggle with language difficulties in your home!
- **Stay inside!** Only go outside when absolutely necessary and remain outside only for the shortest time possible. This is especially true when it is raining!

When should potassium iodide tablets ("iodine tablets") be taken? What do they protect against?

In the event of an accident, radioactive iodine can be released from a nuclear power plant. Taking tablets containing non-radioactive iodine (potassium iodide) at an early stage prevents radioactive iodine from accumulating in the body, especially in the thyroid gland.

The iodine tablets for disaster management must not be confused with iodine tablets used for treating thyroid disorders! The emergency tablets are high-dosage ones that contain about 1,000 times the amount of iodine as the medication.

If necessary, municipal authorities can quickly distribute tablets to the population from fire stations within a radius of up to 100 km (outer zone) around the nuclear power plant. The distribution points in and directly adjacent to the central zone (25 km zone) are listed in the appendix

The disaster management team decides how to distribute iodine tablets in the individual zones based on the expert opinion of the German Federal Radiological Situation Centre. If necessary, you can collect these tablets from the above-stated distribution points following instructions broadcast by radio or corresponding loudspeaker announcements.

In the remaining area of Rhineland-Palatinate that has not been assigned to a zone (radius of 100 km or more), children and adolescents up to the age of 18 and pregnant women are supplied with iodine tablets. The distribution points in this zone will be announced according to needs and the situation of the individual event.

The disaster management team will decide in good time whether the tablets can still be collected from the distribution points in your place of residence in the event of an incident without putting your health at risk. Only if this is guaranteed will you be instructed to collect the tablets via a radio broadcast or after appropriate loudspeaker announcements.

Protecting the thyroid gland from radioactive iodine is particularly important for children, especially infants and babies. Only if the iodine tablets are taken at the right time will your health be most effectively protected.

Potassium iodide tablets do not normally have any side effects in young people.

There is usually only a risk of side effects in the following cases:

- Uncontrolled intake.
- In people who are hypersensitive to iodine or suffer from thyroid disease.
- In people over 45 years of age, because the health risk of thyroid disease from taking high doses of potassium iodide is greater than the risk of damage from radioactive radiation.

The issue of iodine tablets is a precautionary measure and does not mean that the tablets should be taken immediately. Please only take the iodine tablets when you are expressly requested to do so and ensure that you read the package leaflet to avoid damaging your health. But iodine tablets do not provide complete protection against the consequences of a nuclear accident – they only offer temporary protection against radioactive iodine released in the process. However, other radioactive substances such as caesium or strontium can be released and these can cause serious illnesses (e.g. cancer and leukaemia). Taking iodine tablets does not protect against these substances and possible consequential damage.

Further information is also available on the Internet at: www.jodblockade.de

When and how is an evacuation carried out?

Evacuation may be advisable if the protective effect inside the house is insufficient in the long term due to an anticipated or actual release of radioactive substances. In such cases, the disaster management authority in the affected area will order an evacuation.

Specific evacuation plans have been prepared for the area up to 25 kilometres from the Cattenom Nuclear Power Plant. If necessary, evacuation will also take place in areas further away from the plant on the basis of general disaster management planning.

Information on the measures to be taken in the event of an imminent evacuation (evacuation routes, pick-up points, departure times at the assembly points) will be broadcast via radio, television and teletext (see page 16). Evacuation preferably takes place using private cars. The evacuation routes broadcast by the media (see above) should be used for travelling to the pick-up points. The flow of traffic along the evacuation routes will be controlled by the police. The disaster management authorities will provide suitable transport (buses, trains) for people who do not have their own car. In municipalities that may be affected by an evacuation, **assembly points** will be set up for these people at fire stations.

What if the children are not at home?

The disaster management authority will ensure that schools and kindergartens remain closed or are closed if the accident develops over time. If your children are already at these public institutions, they will be taken to a safe reception area together with their teachers and carers. They will be reunited with you or your family members there.

Therefore, only collect your children if you are expressly requested to do so by radio or loudspeaker announcements.

What must you observe during an evacuation?

- Turn your **radio** on and follow the instructions issued by the authorities. If necessary, listen to local warning announcements broadcast by police and fire service loudspeaker vans.
- Please remain calm!
- Pack **emergency luggage** for two to three days: Clothes, laundry, toiletries, medication, important papers, personal documents and money.
- Please help others too. Inform elderly, sick and disabled people in your neighbourhood if you think they may not have heard the evacuation call. If necessary, inform the emergency services.
- If you have enough time, you should first get together with your family members in your own home and then leave the endangered area together. Take your pets with you.
- Switch off all non-essential **electrical appliances** when leaving your flat, house or workplace. Turn off **gas and water connections** and extinguish any open fires.
- If you do not have transportation you will be **collected** from the assembly points.
 This also applies to care home residents and hospital patients.

What should you do if you have been exposed to radiation?

Emergency centres are set up in the pick-up areas. We recommend that you visit these emergency centres, because any radioactive contamination can be detected and removed there. This is done by changing contaminated clothing and washing and showering thoroughly. The doctors at the emergency centres decide what medical measures may be necessary on a case-by-case basis. The locations at which the emergency centres are to be set up is determined by Incident Command depending on the respective situation (traffic situation, meteorological situation, etc.) and communicated to the public. If necessary, additional emergency centres can be set up at any time.

If you are unable to get to an emergency centre, look for a place to wash outside of the area affected by the accident.

- Take off your **outer clothing** and shoes.
- Wash your head, hands and other uncovered areas of your body thoroughly with running water.
- Only then is a shower recommended.
- If possible, **pack** your used clothing in an airtight bag so that it can be checked for contamination later.

Links

German-language website of the Cattenom Nuclear Power Plant https://www.edf.fr/de/la-centrale-nucleaire-de-cattenom/das-kernkraftwerk-voncattenom/

Readings from the measuring stations https://odlinfo.bfs.de

German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

www.bmuv.de

German Commission on Radiological Protection (SSK) www.ssk.de

Taking iodine tablets – further information from the BMUV www.jodblockade.de

KATWARN disaster warning system www.katwarn.de

Emergency Information and Warning App (Notfall-Informations- und Nachrichten-App – NINA) of the Federal Office of Civil Protection and Disaster Assistance (BBK) https://www.bbk.bund.de/DE/Warnung-Vorsorge/Warn-App-NINA/warn-app-nina_node.html

References

- Title page photo: Dr. Motsch, Saarland State Office for Environmental Protection and Occupational Safety
- Graphics: ADD
- INES Scale (page 9): Information for the public in the vicinity of the Tihange nuclear power plant (B), publisher: City of Aachen, City Region of Aachen, District of Düren, District of Euskirchen and District of Heinsberg in close co-operation with the Supervisory and Service Directorate of the State of Rhineland-Palatinate
- Map of the central and outer zone (pages 10 and 11): Rhineland-Palatinate State Office for Surveying and Geographic Information
- Framework recommendations for disaster management in the vicinity of nuclear facilities, recommendation of the German Commission on Radiological Protection, dated 19/20 February 2015



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