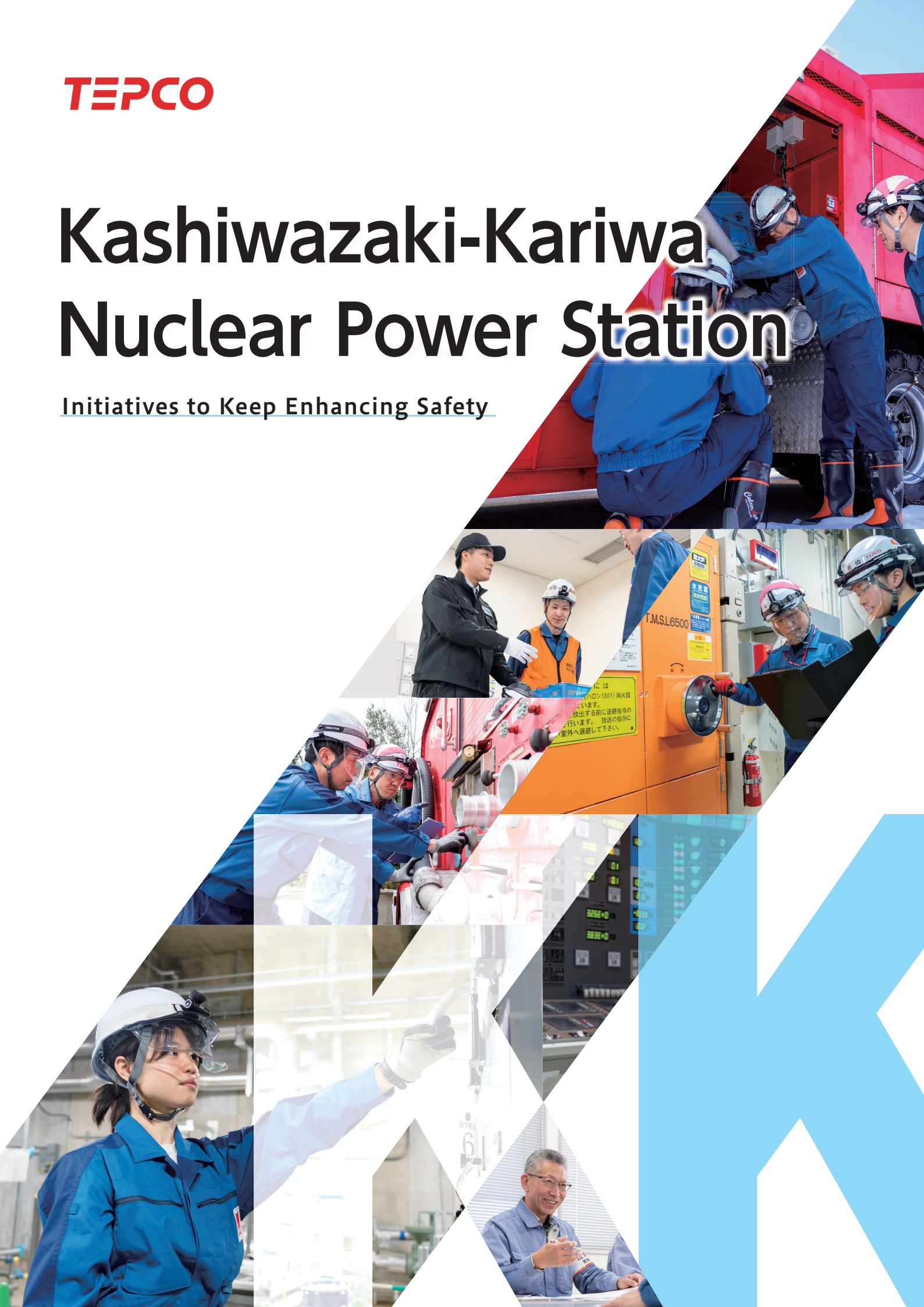
TEPCO

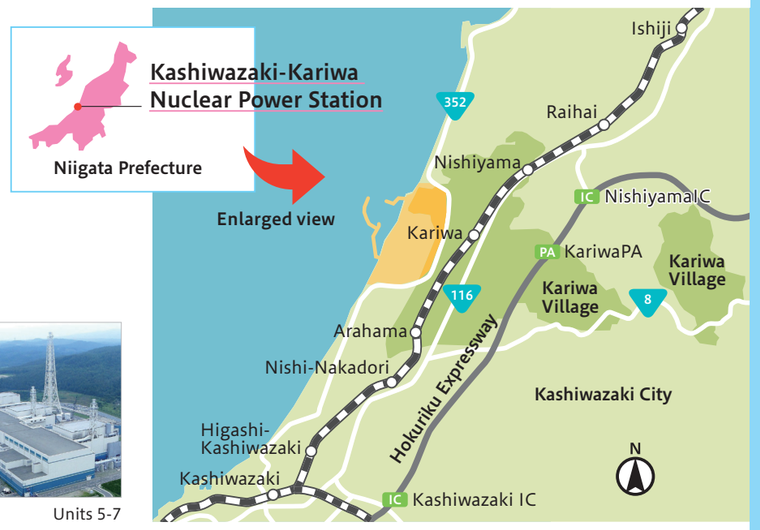
Kashiwazaki-Kariwa Nuclear Power Station

Initiatives to Keep Enhancing Safety



Overview of the Kashiwazaki-Kariwa Nuclear Power Station

The Kashiwazaki-Kariwa Nuclear Power Station is sited in Kashiwazaki City and Kariwa Village in Niigata Prefecture. There are a total of seven reactors with Units 1-4 located on the Kashiwazaki City side, and Units 5-7 located on the Kariwa Village side.




Units 1-4

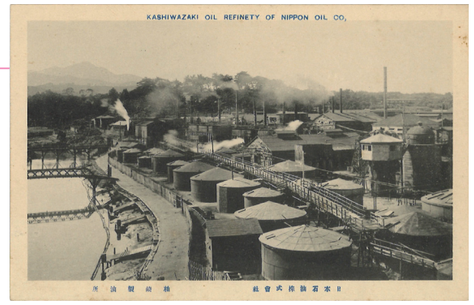

Units 5-7

Power Station facility overview

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Electrical Output	1,100MW	1,100MW	1,100MW	1,100MW	1,100MW	1,356MW	1,356MW
Start of Construction	December 1978	October 1983	July 1987	February 1988	October 1983	September 1991	February 1992
Start of Commercial Operation	September 1985	September 1990	August 1993	August 1994	April 1990	November 1996	July 1997
Reactor Type	Boiling Water Reactor (BWR)					Advanced Boiling Water Reactor (ABWR)	

The historic role of the region in energy production

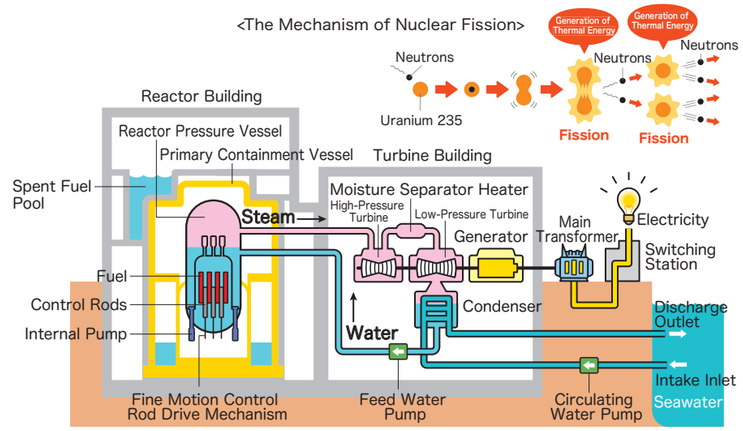
An inscription in the ancient Chronicles of Japan made in the year 668 states that, “The land of Koshi-no-kuni offers oil and coal,” thereby recording the fact that oil from Niigata Prefecture was given as an offering to Emperor Tenji. And, when development of the Nishiyama oil fields began during the middle of the Meiji Era, many refineries were built in Kashiwazaki with oil production reaching its peak at the beginning of the Showa Era. These refineries were closed in 2001. The decision to build the Kashiwazaki-Kariwa Nuclear Power Station was made in 1969 after the Kashiwazaki City Council and Kariwa Village Council passed a resolution to welcome construction of the plant, and the construction of all reactors was completed in 1997.



Nippon Oil Co., Ltd. Kashiwazaki Refinery
(Source: Niigata Prefecture Museum of History/Sasagawa Collection)

How Nuclear Power Stations Work

Nuclear power stations **utilize steam to turn a turbine that generates electricity**, just like thermal power stations. However, the main difference between the two is that thermal power stations burn fossil fuels, such as oil, coal, and liquid natural gas, etc., to produce the steam, while a nuclear power station uses **the heat energy generated from the nuclear fission** of a resource called “uranium.” Nuclear power stations are also unique in that they largely reduce CO2 emission and can **reuse fuel** that has already been used. However, nuclear power stations are **strictly required to manage radiation.**



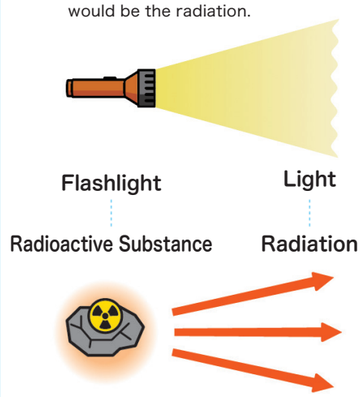
Example of an Advanced Boiling Water Reactor (Units 6-7)

Information About Radiation

Radiation also exists in our natural environment and is used in various ways in our daily lives. At a nuclear power station the radiation and radioactive substances generated through the production of energy are strictly managed.

Radioactive Substances and Radiation

If we use a flashlight as an analogy, the flashlight itself would be akin to radioactive substances, while the light emitted from the flashlight would be the radiation.



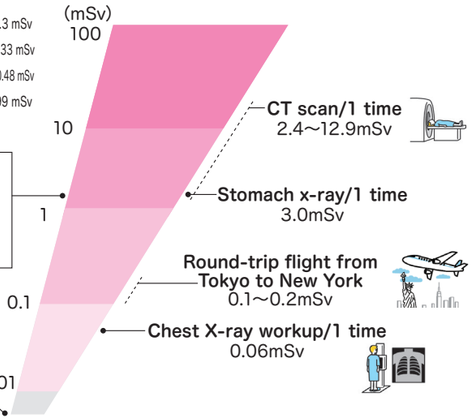
Radiation in Our Daily Lives

Radioactive substances and radiation exist in our natural environment.

- Radiation from space…Approximately 0.3 mSv
- Radiation from the earth…Approximately 0.33 mSv
- Radiation from radon in the air…Approximately 0.48 mSv
- Radiation from food…Approximately 0.99 mSv

Average per capita natural radiation in Japan: Approximately **2.1** mSv per year
(World average: Approximately 2.4mSv/year)

Radioactive substances emitted from nuclear power stations:
Less than 0.001mSv/year



Source: “Nuclear Consensus 2024”
The Federation of Electric Power Companies of Japan
*Sievert (Sv): Unit that expresses the amount of impact that radiation has on the human body
*Units are in millisieverts (mSv). 1 mSv=1,000 μSv

Site Diagram of Primary Facilities

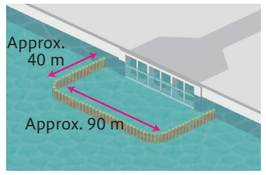
Total site area: Approximately 4,2 million m² (equal to approximately 90 Tokyo Domes (Kashiwazaki city: Approximately 3.1 million m²; Kariwa Village: Approximately 1.1 million m²)

- - - City/village borderline
------ Firebreak

❶Reactor Buildings/Turbine Buildings (Units 1-7)

A nuclear power station consists of reactor buildings, housing the reactors, and turbine buildings, ontaining the turbines and generators. The reactor buildings are equipped with emergency diesel generators to supply power to the station in the event that external power is lost in an abnormal event.

❷Retaining Weirs



Retaining weirs have been built on the ocean side of the intake inlet to secure seawater for cooling purposes in the event that the ocean recedes due to a tsunami.

❸Seawall (Unit 5-7 side)

An embankment approximately 1 km long and 3 m high made of cement-treated soil has been built on the ground at 12 m above sea level (15 m above sea level in total) to protect the site.

❹Emergency Response Center

The Emergency Response Center would serve as a center of operations for providing assistance to the main control rooms and taking appropriate action in the event of a serious accident.

❺Freshwater Reservoir

A freshwater reservoir has been built on high ground approximately 45 m above sea level in order to secure a water source for supplying the reactors, etc., with cooling water. The capacity of the reservoir is approximately 20,000 tons.

❻Hi-capacity Water Engines/Fire Trucks/Power Supply Vehicles/Alternative Heat Exchanger Trucks

These vehicles have been put on high ground approximately 35 m above sea level so that they are not impacted by a tsunami, and also distributed throughout the site. Furthermore, along with implementing seismic countermeasures for the locations of these vehicles, we have also reinforced access routes from the vehicle locations to the plant.

❼Firebreak

A firebreak has been created to prevent an off-site fire from spreading to the power station. All flammable objects/ materials have been removed from the area.

❽Air-cooled Gas Turbine Generator Truck (GTG)

This vehicle is equipped with a generator that produces electricity by turning a turbine with the combustion gases from diesel fuel. These vehicles have been distributed around Unit 7 and on high ground 21m above sea level and would be used as substitute power sources in the event that electricity from transmission lines was lost and emergency diesel generators were inoperable.

❾Seawall (Unit 1-4 side)

A steel reinforced concrete seawall approximately 10 m in height (approximately 15m above sea level taking into account the elevation of the site) has been built over a distance of approximately 1.5 km on the portion of the site that is 5m above sea level.
*Deliberations about countermeasures for liquefaction deep underground are underway.

South Breakwater
North Breakwater
Discharge Outlet
Intake Inlet
Intake Inlet
Discharge Outlet
Unit 1
Unit 2
Unit 3
Unit 4
Unit 7
Unit 6
Unit 5
Approx. 5m above sea level
Approx. 12m above sea level
Main Administration Building
Observation Deck
Approx. 55m above sea level
Ultra High-Voltage Switching Station
Firebreak
Central Intersection
Approx. 45m above sea level
Firebreak
Kashiwazaki City Area
Kariwa Village Area
Main Gate
Service Hall
Approx. 65m above sea level

「Safety Initiatives」 at the Kashiwazaki-Kariwa Nuclear Power Station

We have implemented layers upon layers of safety improvement so that we can have a “power station that is highly resilient to extreme events”

Kashiwazaki-Kariwa Nuclear Power Station
Superintendent: **Takeyuki Inagaki**

I will not compromise because I’ve experienced an accident first hand

I was the recovery team leader when the Fukushima Daiichi Nuclear Power Station Accident occurred and I learned many lessons while also harboring many regrets. In regards to facilities, these regrets include the vulnerability of our tsunami protection, insufficient preparedness to restore power in the event of a total power loss and use alternative means to inject cooling water and cool the reactors, etc., as well as insufficient preparedness of means to prevent the discharge of radioactive substances and hydrogen explosions after core damage. I also learned a very important lesson in that our organizational structure and procedures for handling emergencies were insufficient. One of my deepest regrets in particular, which brings tears to my eyes even to this day, were the instructions I gave that put my subordinates in extreme danger. **With the understanding that it is impossible to respond to an accident without constant self-improvement and my unwillingness to compromise because I have experienced a nuclear power station accident first hand**, we have not only improve facilities, but also operational resilience, such as emergency response drills.

We have put layer upon layer of safety measures in place and have enhanced our ability to respond in emergencies through various types of drills.

We have improvements layer upon layer of safety improvement for our facilities in order to achieve the “defense-in-depth” concept as noted in the new regulatory requirements. For example, for “power sources,” not only do we have redundant systems and multiple external power lines in place, we have also installed emergency diesel generators in each unit that can also be used to supply power to neighboring units. Furthermore, we have also placed gas turbine power generator trucks and power trucks on-site in case the aforementioned power sources are rendered inoperable. In regards to procedures, every month we conduct a general emergency response exercise based on various scenarios. This exercise is repeated under various conditions and the participants are not informed in advance of the details of the scenarios making this “blind exercise” for them and consequently cultivating their ability to adapt and make decisions. In addition, we have created a scheme by which station personnel can directly handle problems in the field and repeatedly implement individual field drill on the use of fire trucks, how to connect power trucks, as well as how to spray water and remove rubble. **Through these initiatives we aim to become a “power station that is highly resilient to extreme events.”**

Creating a lively work place that everyone is proud of

In addition to these measures, in order to make the power station a better place to work we have created the “Purpose of the Kashiwazaki-Kariwa Nuclear Power Station” that conveys to everyone that works at the power station, including contractors, the ideal state that we aim to achieve and our “resolution/promise.” **In order to create a “better power station,” everyone that works here needs to communicate and trust each other.** I personally am involved in encouraging workers to greet one another, measures for praising employees, dialogue sessions, and daily blog posts. Site personnel are also working with contractors to improve communication. Thanks to these initiatives, workers at the plant are starting to take pride in it and making efforts to improve it. We continue to implement improvement activities in which all employees participate so that everyone working at the power station can say with confidence that, “this power station is being managed satisfactory.” I will continue to manage the power station this way so that we can have a **"power station that embraces, and is embraced by, the local community."**

The Details of the Fukushima Daiichi Nuclear Power Station Accident and the Lessons Learned from It

2:46 PM, March 11, 2011

Earthquake occurs
(Hypocenter: Off the coast of the Sanriku region; Magnitude: 9.0)

Automatic reactor scram
- **Shutdown**
  - Automatic scram of Units 1, 2 and 3 that were online

Power transmission/receiving facilities are damaged which leads to a loss of off-site power
- Power receiving facilities are damaged and transmission towers are toppled resulting in a loss of off-site power

Emergency generators activated
- **Cooling**
  - Emergency diesel generators are activated and cooling water continues to be injected into the reactors, etc.

3:35 PM, March 11, 2011

Tsunami arrives

Power required to cool the reactors, etc., is lost
- **Cooling**
  - The tsunami floods important facilities, such as emergency diesel generators, etc., and function is lost

Functions for cooling reactors, etc. are lost
- **Cooling**
  - Since reactor cooling water injection has stopped, the temperature of the fuel rises and the fuel melts
  - Hydrogen is generated

The pressure vessel is damaged and the primary containment vessel ruptures
- **Containment**
  - The Units 1, 2, and 3 containment vessels rupture
  - Radioactive substances and hydrogen leak into the reactor building

The buildings are destroyed by hydrogen explosions (Units 1, 3, 4)
- **Containment**
  - Hydrogen explosions occur at Units 1, 3 and 4 and greatly damage the reactor buildings

Radioactive substances are released into the environment (Units 1, 2, 3) → **Large-scale land contamination**

Lessons learned from the accident

Measures to protect against tsunamis, such as preventing a tsunami from flooding the site, etc., were insufficient.

➡Turn to page 8 for details on tsunami countermeasures

Safety Measure 1

Measures for restoring power and the means for injecting cooling water into the reactors, etc., and cooling them in the event of a total power loss were insufficient.

➡Turn to pages 9 and 10 for details on power source/cooling water injection facility enhancements

Safety Measure 2・3

Measures for preventing post-core damage hydrogen explosions and the discharge of radioactive substances were insufficient.

➡Turn to page 11 for details on countermeasures to prevent the dispersion of radioactive substances

Safety Measure 4

Safety Measures

1 Protecting the station from tsunamis and earthquakes

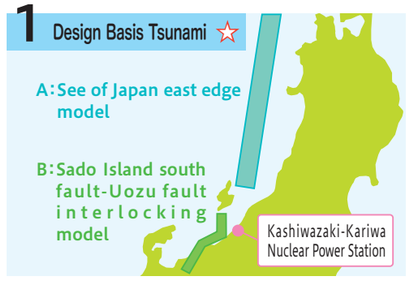
Kashiwazaki-Kariwa Nuclear Power Station, Maintenance Department Units 1-4, Architectural Group, Group Manager,
Ryoji Sato

We are reinforcing facilities to prevent the inundation into buildings in the event of a tsunami.

Protecting the station from the force of a tsunami and inundation

In order to protect the station from the force of a tsunami and being flooded by it we built a seawall that can protect the station from a tsunami 15m high in the wake of the Great East Japan Earthquake and Tsunami. Furthermore, we have also built seawall and installed protection plates around the reactor buildings in order to protect them from the force of the waves and prevent them from being inundated. We have also installed watertight doors to prevent flooding of important areas that serve as locations for emergency power sources and equipment used to cool the reactors in the event of emergency.

1 Design Basis Tsunami ☆



The results of simulations based on active fault assessment results and a literature search pertaining to tsunamis that have occurred in the vicinity of the power station were used to predict the largest tsunami that could occur.

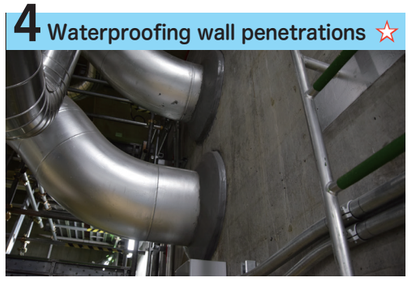
2 Seawall construction ☆

The height of the [largest] design basis tsunami that could impact the Kashiwazaki-Kariwa Nuclear Power Station is approximately 7-8 m, but by building a cement-treated soil embankment that is approximately 3m high on site grounds that are already 12m above sea level, we have in effect constructed a seawall that is 15m high (Unit 5-7 side).

3 Installing watertight doors ☆

We have waterproofed important areas where emergency power source equipment and equipment used to cool the reactors in the event of an accident are located just in case we are unable to prevent flooding.

4 Waterproofing wall penetrations ☆



The penetrations in the walls and floors of important areas where pipes and cables come through have been sealed with silicon, etc. to make them waterproof.

Earthquake countermeasures

The reactor buildings have been built on top of strong bedrock that is resistant to the shaking of an earthquake. And, in the wake of the Niigata Prefecture Chuetsu-oki Earthquake that occurred in July 2007, we also strengthened seismic resistance measures. Furthermore, in order to comply with the new regulatory requirements issued after the Fukushima Daiichi Nuclear Power Station Accident, we conduct seismic resistance assessments and engage in seismic resistance renovations. Some examples include adding/reinforcing supports for the pipes/electrical conduits, etc. inside buildings, and strengthening the trusses (steel structure) that support the building roofs by adding steel to them.

We have added anywhere from 1,400-3,000 extra supports for building pipes at each unit.

◆: Countermeasures that were in place prior to the Fukushima Daiichi Nuclear Power Station Accident

☆: Additional/strengthened countermeasures based on the new regulatory requirements issued after the Fukushima Daiichi Nuclear Power Station Accident

Safety Measures

2 Preventing power from being interrupted

Kashiwazaki-Kariwa Nuclear Power Station, Maintenance Department Units 5-7, Electrical Component Group, Group Manager,
Norifumi Minayoshi

In preparation for a loss of existing power sources, we have installed diverse and redundant power equipment.

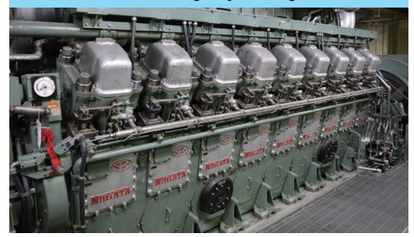
Installing multiple alternative power sources on-site and distributing them in places that would not be affected by a tsunami.

We have multiple power sources that would be used to supply electricity to equipment used to cool the reactors in the event that all on-site power was lost. Furthermore, these substitute power sources have been distributed in places that would not be affected by a tsunami.

1 Supplying power from external power sources ◆

Five transmission lines for external power have been installed to ensure that the power station can receive the off-site power that it needs.

2 Installation of emergency diesel generators ◆



If off-site power is lost, the emergency diesel generators would activate and supply power needed to safely shut down the reactors. These generators can also be used to supply power to neighboring units.

3 Air-cooled gas turbine generator truck (GTG) deployment ☆

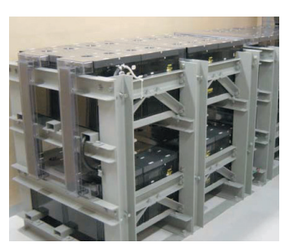
These vehicles are equipped with a generator that produces electricity by turning a turbine with the combustion gases from diesel fuel. They have been distributed throughout the site in locations that would not be affected by a tsunami.

4 Power supply vehicle deployment ☆

These vehicles would be used to supply power to important equipment if the plant lost AC power. They are highly mobile and can be moved to the required location to provide the required electricity.

Additional installation of DC power sources

At the nuclear power station, DC power sources are used mainly for plant status monitoring and control. Therefore, when the plant was constructed multiple large capacity storage batteries were installed as DC power sources. We have improved reliability by additionally installing separate large capacity storage batteries in places inside the reactor buildings that are more than 15m above sea level and would most likely not be impacted by flooding.



Safety Measures

3 Continually cooling the reactors

Kashiwazaki-Kariwa Nuclear Power Station, Maintenance Department Units 1-4, Turbine Group, Group Manager,
Takashi Kurita

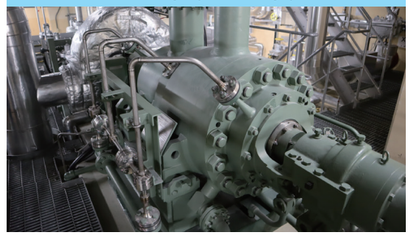
※In the case of Unit6,7

Furthermore, we have installed redundant and diverse cooling water injection systems and heat removal systems so that we can continually cool reactors even if all power is lost.

Deploying fire trucks on site and building a reservoir

In preparation for the loss of all power to the station, which would render motorized cooling water injection systems inoperable, we have various types of pumps and equipment on hand that can inject cooling water into the reactors. We also have fire trucks placed on-site. This prevents all equipment from simultaneously being rendered inoperable due to common cause.

1 Installation of an Emergency Core Cooling System (ECCS) ◆



This system uses motor-driven pumps as well as pumps that are driven by the steam from the reactors to inject cooling water into the reactors.

2 Installation of a High-Pressure Alternate Cooling system (HPAC) ☆

If the high-pressure ECCS cannot be started or continually operated, or if all power is lost, this system would use pumps driven by the steam from the reactor to inject cooling water into it.

3 Fire truck deployment ☆

Fire trucks can be connected to the reactor buildings to inject cooling water into the reactors and the spent fuel pools. They have been distributed throughout the site so that all of them would not be simultaneously rendered inoperable.

4 Alternative heat exchanger truck deployment ☆

These trucks would be used to cool the reactors and the inside of the primary containment vessels if the existing heat removal systems were rendered inoperable. The use of these systems would delay the venting of radioactive substances into the atmosphere by at least approximately 10 days.

Freshwater reservoir

We have built a freshwater reservoir on high ground approximately 45 m above sea level to secure water sources for cooling the reactors and spent fuel pools. The capacity of the reservoir is approximately 20,000 tons, thereby providing enough water to cool Units 6-7 and the spent fuel pools for more than seven days.

◆ : Countermeasures that were in place prior to the Fukushima Daiichi Nuclear Power Station Accident

☆ : Additional/strengthened countermeasures based on the new regulatory requirements issued after the Fukushima Daiichi Nuclear Power Station Accident

Safety Measures

4 Mitigate the release of radioactive materials

Kashiwazaki-Kariwa Nuclear Power Station, Maintenance Department Units 5-7, Reactor Group, Group Manager,
Ryuta Shimosakoda

※In the case of Unit6,7

In cace of an accident,even with the enhanced safety Measures,we have several pieces of equipment in place to mitigate the release of radioactive materials

Preventing hydrogen explosions in the buildings and the discharge of radioactive substances

We have installed reactor building hydrogen treatment equipment that would prevent the rise of hydrogen concentrations if hydrogen generated from core damage were to leak from the core into the reactor building. And, even if an accident were to occur, we have also installed filter vents that would greatly reduce the amount of radioactive substances discharged into the atmosphere and suppress the dispersion of these materials off-site.

1 Filter vent installation ☆

By passing the gases from inside the primary containment vessel through filter vents before expelling it into the atmosphere, we can remove more than 99.9% of particulate radioactive substances and inorganic iodine. And, we have also installed iodine filters that can remove more than 98% of organic iodine.

2 Reactor building hydrogen treatment equipment installation ☆

This equipment does not run on electricity but rather uses catalysts to convert hydrogen and oxygen into steam thereby preventing a rise in hydrogen concentrations. This equipment has been installed on the operating floors of the reactor buildings.

3 Large volume pump truck deployment ☆

If there is the a possibility of radioactive substances being discharged from the reactors or the spent fuel pools, water cannons would be connected to large volume pump trucks to spray the openings of the reactor buildings with water. These large volume pump trucks can pump a maximum of 20,000 L of water per minute and can be supplied with fuel from tanker trucks thereby enabling continuous operation. If they can't be refueled with tanker trucks, the fuel tanks that are attached to the pump trucks can be used for approximately 12 hours of operation.

Expanding evacuation assistance

Employees that are experts in preparedness and evacuation assistance have been assigned to an evacuation assistance team base that has been established in Kashiwazaki City. In accordance with the Agreement for Cooperation in Times of a Nuclear Disaster signed with Niigata Prefecture in October 2020, TEPCO built a scheme to provide cooperation in regards to personnel and equipment/materials. By cooperating in nuclear emergency preparedness exercises conducted by Niigata Prefecture, we keep improving the cooperation scheme.

Training

We developed organizational structure and procedures that can deal with a severe accident and repeatedly conduct various types of drills and exercises.

emergency exercises

We repeatedly conduct exercise based on various scenarios in order to strengthen our ability to respond to emergencies.

General exercises for all power station emergency response personnel are regularly held. During a general exercise, participants learn how to handle severe accidents and natural disasters, such as tsunamis and earthquakes. "Blind exercises," in which participants are not notified in advance of the scenario, are used to strengthen organizational planning and the ability of each employee to respond to emergencies.

Examples of individual drill/training

Simulator training

The technical prowess of operators is further improved by using a simulator that replicates the same operations conducted in actual main control rooms.

Debris removal training

Site personnel that are licensed to drive special large vehicles participate in heavy equipment operation drill in order to remove debris that has been scattered by a tsunami or repair unlevel surfaces in roads created by an earthquake. These skills are useful for quickly securing access routes necessary to do recovery work.

Power supply drill

Drill is conducted to enable first responders to quickly supply the power needed to respond to an emergency.

(*The photo is from air-cooled gas turbine generator truck start-up drill)

Connection drills for cooling water injection

In order to enhance the reliability of core cooling injection using fire trucks in an emergency situations, periodical drills to connect the hoses from fire trucks to the reactors are implemented.

INTERVIEW Aiming for the world's highest levels of safety in order to gain trust

Kashiwazaki-Kariwa Nuclear Power Station, Operations Management Department Units 5-7, Shift Supervisor, **Seiki Suganami**

We are in charge of operating nuclear reactors and power station facilities, so as such we regularly conduct severe accident training using simulators, etc. It is exactly because our company was responsible for the Fukushima Daiichi Nuclear Power Accident that we feel the need to achieve the world's highest levels of technical prowess and the ability to respond to emergencies, and continually aim for new heights.

Kashiwazaki-Kariwa Nuclear Power Station, Operations Management Department Units 5-7, Operator, **Minami Koide**

As an operator that performs field patrols and inspections, I make sure to listen to the equipment and thoroughly follow procedures to prevent human error. Through training at thermal power stations, I have experienced what it is like to work at a power station that is online and remain on guard at all times. I hope that my own growth will help to regain trust in the nuclear power station.

Security

We continue to make improvements to appropriately protect nuclear materials so as to prevent security issues, such as the unauthorized use of an ID card, etc., from occurring.

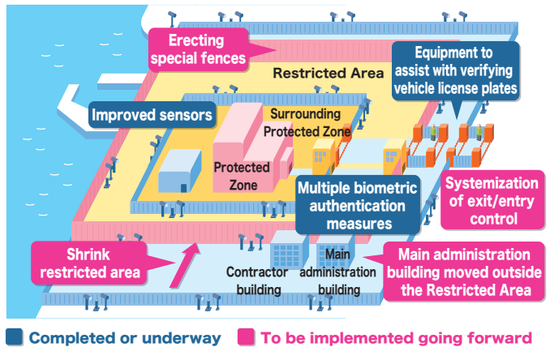
Improvement initiatives to appropriately protect nuclear material

Promoting improvements for both facilities and operation

In the wake of physical protection* issues that have come up, such as the unauthorized use of an ID card, etc., we are promoting improvements to further elevate the accuracy of security measures for both facilities and operation.
In regards to security, throughout the entire power station we are promoting initiatives to "proactively share information on [insufficiencies] noticed in the field and quickly rectify them." Furthermore, these initiatives are checked by a team (Monitoring Office) under the direct supervision of the President so that no one becomes complacent.

*Physical protection: Preventing intruders with malicious intent from trespassing on nuclear power station grounds and/or engaging in obstruction/sabotage, and preventing the theft or malicious use of nuclear materials

<Initiatives on facilities (facilities improvement)>



<Initiatives on operation>

Observation of employee behavior by the Monitoring Office

Dialogue sessions between the site superintendents and contractors about physical protection

INTERVIEW Be self-aware of, and take pride in, improving power station security

Kashiwazaki-Kariwa Nuclear Power Station, Security Management Department, Department Manager, **Takeshi Horikawa**

As a Physical Protection Manager, continually questioning myself and not ignoring things that may seem trivial are indispensable for improving security. By having everyone that works at the power station understand terrorism countermeasures and security tasks, we aim to become a power station that can give local community peace of mind.

Kashiwazaki-Kariwa Nuclear Power Station, Security Management Department, Nuclear Security Facilities Operations Group, **Kou Takahashi**

In order to enhance security at the power station it is indispensable that not only security personnel, but also ordinary station personnel and contractors keep the responsibility to prove their identity. I want to further improve security at the power station by having everyone who works here cooperate with one another.

Japan Nuclear Security System Co., Ltd., Niigata Office, Kashiwazaki-Kariwa Protection Team, **Arata Shinada**

Of course, we are always trying to improve security, but we're also striving to create mechanisms that are stress-free for both security personnel and personnel entering the site. And, we are not just focusing on results, but also on how we produce those results. I would like the power station to be a place where there is a plethora of cooperation and corporate boundaries are transcended for mutual benefit.

Communication

By invigorating both internal and external communication we will ensure that safety is the first priority for power station management

Communication within the power station

Encouraging employees to greet one another

We believe that good communication begins with greetings, so in April 2022 the Superintendent began encouraging workers to greet one another as they passed through the main gate. Now, in addition to site personnel, site superintendents from contractors also participate in this activity in an effort to invigorate communication.

Thank-you cards

Thank-you cards are being used to build a “culture of praise” and enlarge our “circle of gratitude.” The Superintendent conveys feelings of gratitude by presenting site personnel and contractors with handwritten thank-you cards.

INTERVIEW Aiming to root the habits of praising and giving thanks

Niigata Environmental Service Co., Ltd., Kashiwazaki Office, Superintendent,
Chikashi Tanabe

I believe that good work comes from good communication. Communication throughout the entire Kashiwazaki-Kariwa Nuclear Power Station has improved, and it has become easier for personnel on site to greet and seek advice from one another. I believe that everyone on site, including contractors, has become closer. Personally, I would like to further root the habit of praising and conveying gratitude to one another.

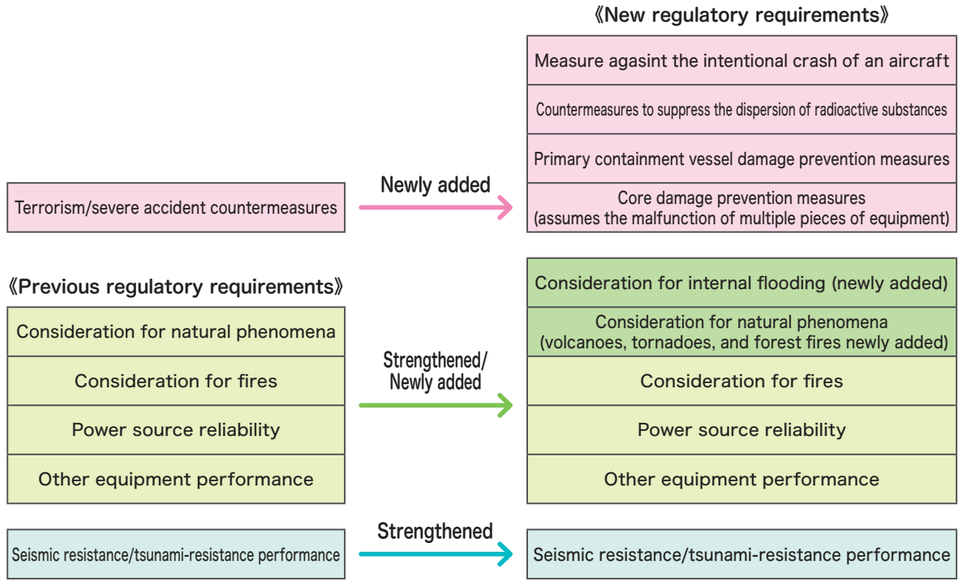
Communicating with external parties

Participating in local events and drawing upon those experiences during daily duties

In addition to the paper newsletter that we distribute, we have also started to post videos. We will continue to convey information on subjects that local residents want to know about. And, all site personnel are joining hand-in-hand with the local communities to participate in local events and activities that contribute to the local society. I would like to further increase these opportunities since they are valuable chances to directly hear from local residents and leverage those opinions in the course of our duties.

New regulatory requirements and key points

The new regulatory requirements that were issued in July 2013 greatly enhanced existing standards for measures against earthquakes and tsunamis, and also required operators to formulate “severe accident countermeasures” and “terrorism countermeasures,” which until this point had been voluntary.



The newly added “terrorism/severe accident countermeasures” require, for example, that organization structure and procedures be created to enable power sources and cooling water injection systems to be backed up if main systems are lost as a result of the intentional crash of an aircraft in order to maintain the safety of the reactors, and also call for the deployment of mobile equipment that can be used for various purposes, and regular drill to enable this equipment to be used in the event of emergency.
Furthermore, in recognition of the threat of a military assault, such as a missile attack, etc., the national government has also formulated countermeasures from both national defense and foreign policy perspectives. Additionally, in order to strengthen security, TEPCO periodically participates in joint exercise with the police and the Coast Guard, and is always engaged in measures to prevent intruders and remain on guard. TEPCO also proactively employs human resources from outside the company, such as police and fire station veterans, in order to leverage their knowledge to make improvements in an effort to improve our ability to respond to emergencies.

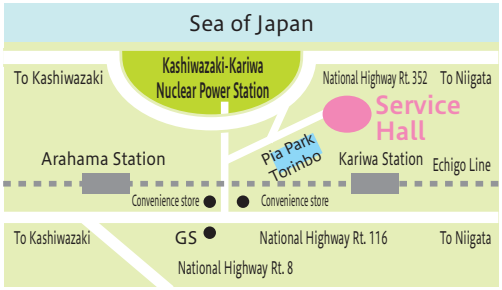
Regular training and drill on the operation and connection of mobile equipment, such as the removal of rubble with wheel loaders (left) and connecting alternative heat exchanger trucks (right), etc., is carried out to ensure that this equipment can be quickly and correctly used in times of emergency.

Disseminating information in order to increase the transparency of the power station

Service Hall

We allow people of the local community to use our Service Hall to sit and relax in an effort to have them become more acquainted with the Kashiwazaki-Kariwa Nuclear Power Station. In the gallery (Ecoron Forest), we have exhibits on nuclear power generation and the safety measures implemented at the power station, and we also have a play space for small children that visitors are free to use.

Location: 4236-1 Kariwa, Oaza, Kariwa Village, Kariwa County, Niigata Prefecture
TEL: 0120-344-053 (9 AM-5 PM: for reservations only)
Hours of operation: 9 AM-4:30 PM
Closed during the year-end/New Year's holiday, the first Wednesday of each month from April through November, and on the first and third Wednesdays of each month from December through March.
Entrance fee: Free
Parking is available for 10 large buses and 40 regular-sized vehicles
Misc: Free Wi-Fi (in five languages), barrier free facility, non-smoking



Corporate Communications Activities

Communications booths

We have set up TEPCO communication booths at various locations within Niigata Prefecture. At these booths we give explanations of conditions at the power station and Japan's energy situation, and also listen to the opinions of visitors.

Communications booths

Disseminating information

Along with posting information on power station initiatives and troubles, etc., on our website, we also hold regular press conferences to explain these issues.

Press conferences

Various types of media (Japanese)

Website

Scan the QR code for more information

Includes an overview and the latest information about the Kashiwazaki-Kariwa Nuclear Power Station as well as information on safety measure initiatives, etc.

KK channel!

Scan the QR code for more information

Video library for conveying information about initiatives at the Kashiwazaki-Kariwa Nuclear Power Station as well as comments from the people that work there.

Instagram

Scan the QR code for more information

Official Instagram account for the Kashiwazaki-Kariwa Nuclear Power Station. Use to post pictures of daily life at the power station and the scenery of the region.

Tokyo Electric Power Company Holdings, Inc., Kashiwazaki-Kariwa Nuclear Power Station
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TEL: 0120-120-448 (weekdays from 9 AM-5 PM)

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