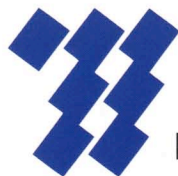
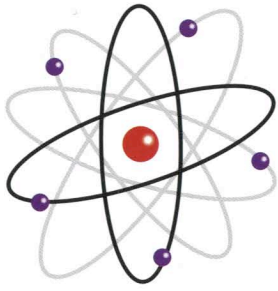


Sendai Nuclear Power Station

Nuclear Power Training Center



Kyushu Electric Power Co., Inc.



For Nuclear Power

★ The Nuclear Training Center was established to improve



■ Floor area: Two-story study building: approx. 2,500m²

Two-story practical training building: approx. 2,300m²

■ Inaugurated: November 1996

Safety

the techniques and skills of operators and maintenance staffs



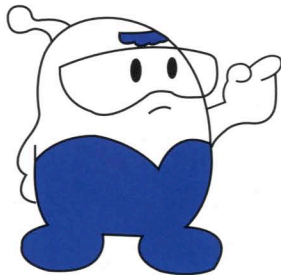
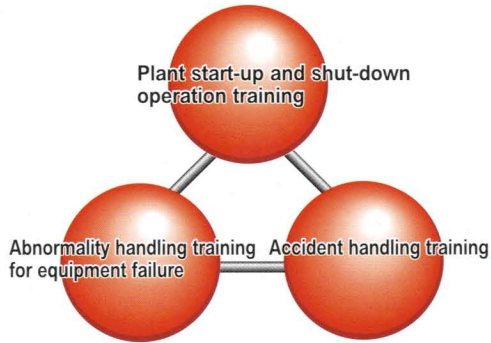
Outline of Sendai Nuclear Power Station

Item		Unit 1	Unit 2
Site		1765-3, Aza Katahirayama, Gumizaki-cho, Satsuma Sendai City, Kagoshima	
Site area		Approx. 1,450,000m ² (including 100,000m ² of reclaimed land)	
Capacity		890,000kW	
Reactor type		Pressurized Water Reactor (PWR)	Pressurized Water Reactor (PWR)
Fuel	Classification	Low enriched UO ₂ (approx.4%)	Low enriched UO ₂ (approx.4%)
	Loading capacity	Approx.72tons	Approx.72tons
Start of commercial operation		July 4, 1984	November 28, 1985



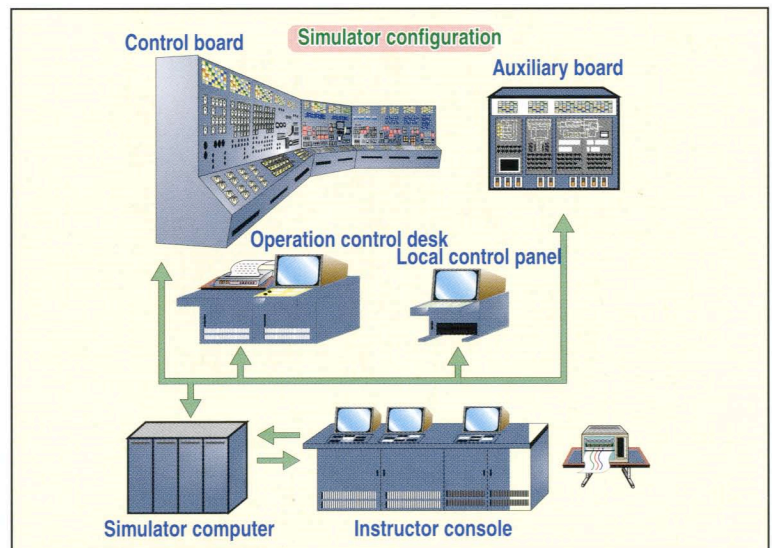
Operation Training

Principal training items



Features of the Simulator

1. Modeled after the central control board of Sendai Unit 1, the simulator allows the trainees to perform the same operations as that of the actual unit.
2. Offers plant start-up and shut-down operation training plus accident/failure handling training for about 150 types of accidents and failures.
3. Helps trainees to feel that they are actually operating the power station ; for example, the lights dim or turn off when a large pump starts or the supply of main electricity stops.
4. A local control panel is provided to help trainees learn local operation steps in the power station.
5. Plays back details of pervious training for reviewing.



● Instructor room



● Operation simulator room



● Operation staff training system

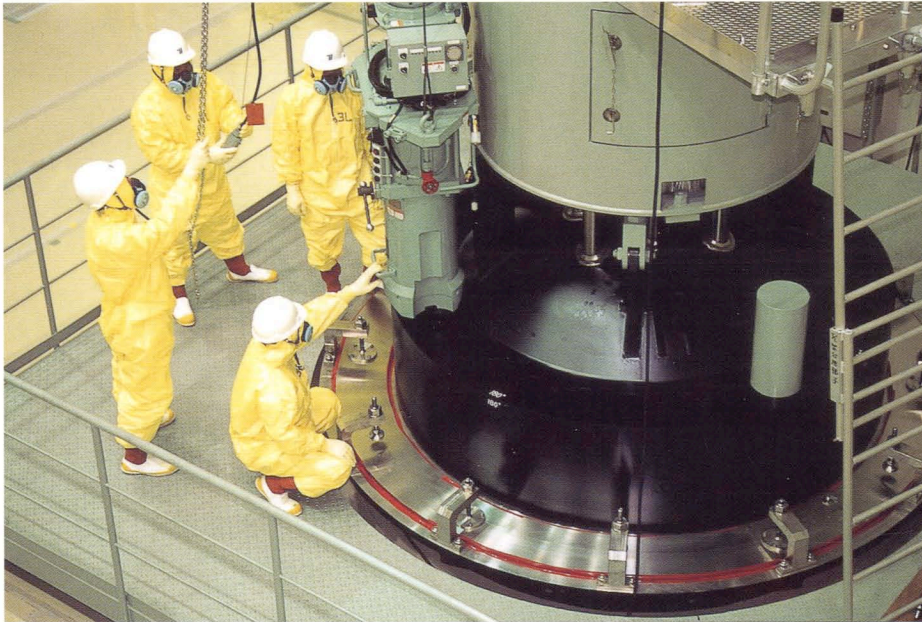
Division Training course		Introductory training → Patrol staff training → Turbine/electric operator training → Reactor operator training → Supervisor training				
		Sendai Nuclear Power training center	Introductory course -1	[Progress bar]		
Introductory course -2	[Progress bar]					
Standard course	[Progress bar]					
Technical course	[Progress bar]					
Family course	[Progress bar]					
N T C	Beginners course	[Progress bar]				
	General course	[Progress bar]				
	Upper rank course	[Progress bar]				
	Supervisor course	[Progress bar]				

NTC: Nuclear Training Center Ltd.
(Located in Fukui Pref.)



Maintenance Training

Mechanical equipment



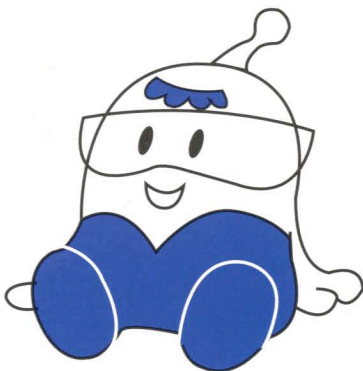
● Reactor vessel head mock-up

Used for training in opening, inspection and replacement of the reactor vessel head.



● Steam generator channel head mock-up

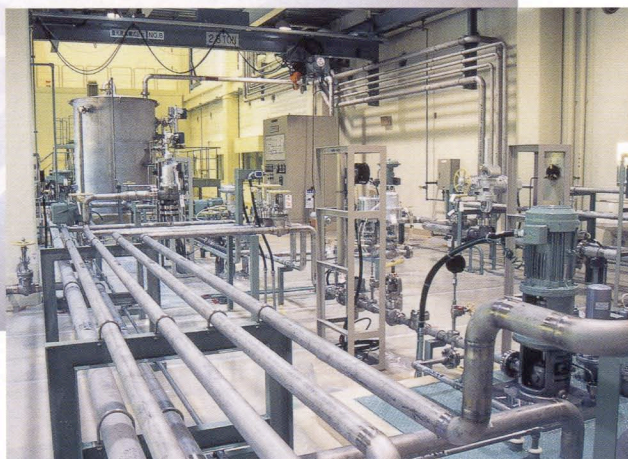
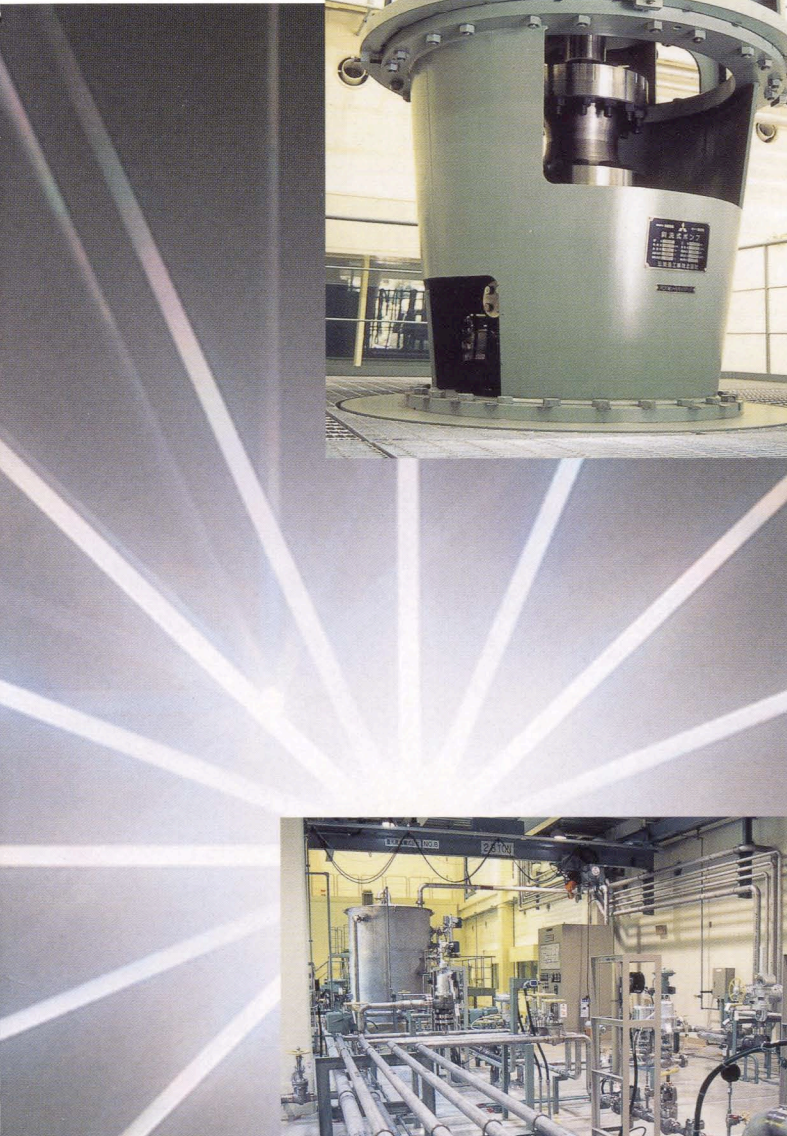
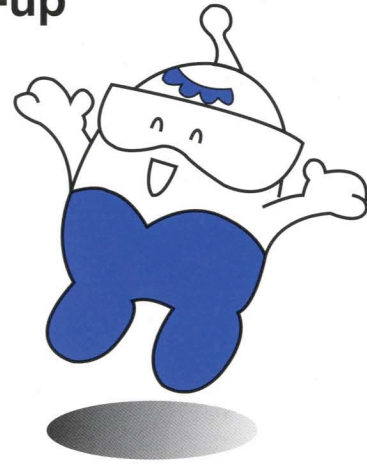
Used for training in maintenance and inspection of steam generator.





● Reactor coolant pump shaft seal mock-up

Used for training in disassembly, inspection and assembly of the shaft seal.

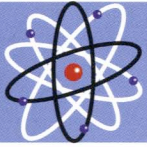


● Loop equipment

Systems comprise pumps, tanks, valves, etc. The loop equipment is used for training in disassembly, inspection and assembly of each device, and adjustment/operation checking of control equipment.

● Other training facilities

- Non-destructive inspection apparatuses
- Welding equipment
- Individual components (pumps and valves)
- Refueling machine simulator



● Control rod drive mechanism control system

Used for training in inspection and operation test of each control unit, alarm/trip circuits tests and failure handling via simulated failure.

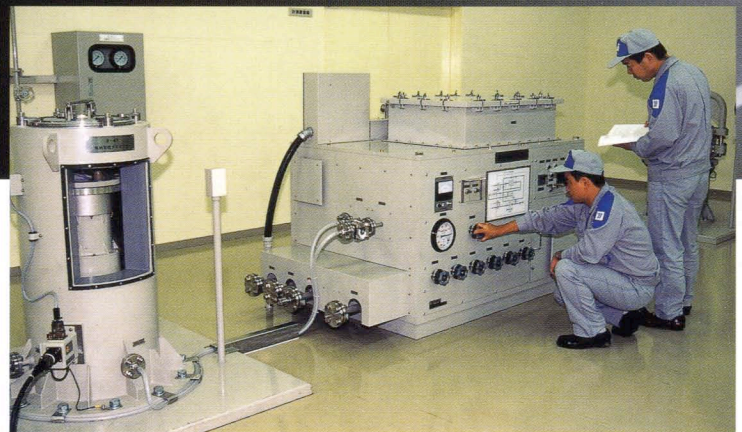


● Solid state protection system

Used for training in performance/characteristic tests such as input/output relay tests and failure handling via simulated failure.

● Other training equipment

- Reactor control and protection system
- EH governor control system
- Turbine monitoring equipment
- Generator automatic voltage regulator system
- Ex-core nuclear instrumentation system
- Protective relay board, etc.



● Radiation monitoring system

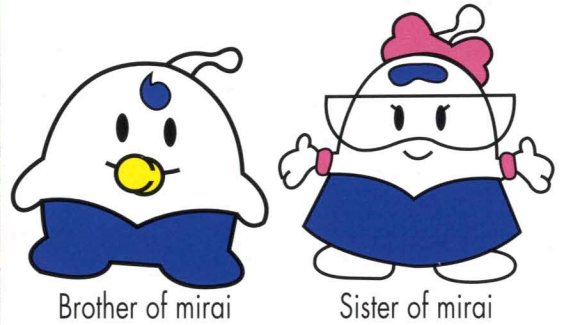
Used for training in inspection and adjustment tests of sensors.



Maintenance Training

Electric equipment

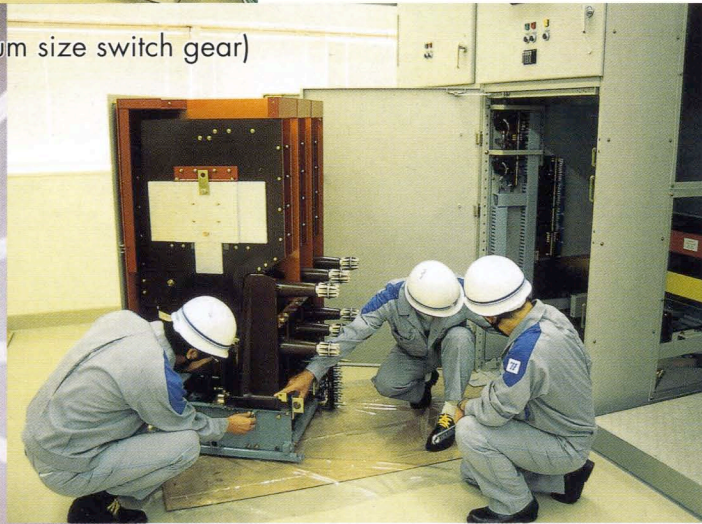
● **In-plant switch gears** (metal clad switch gears, power center and control center)
Used for training in inspection, adjustments and protective device tests of opening gears.



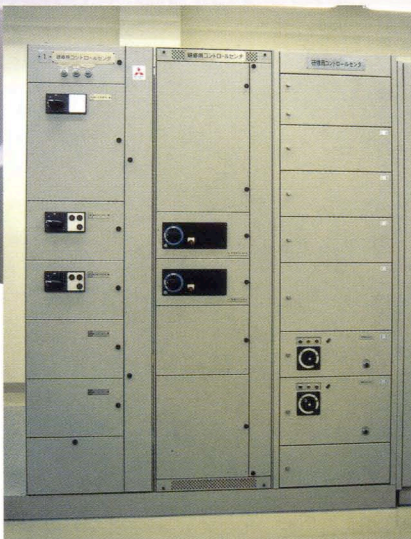
Brother of mirai

Sister of mirai

● **Power center** (medium size switch gear)

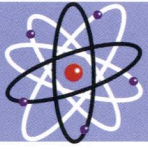


● **Metal clad switch gear**
(Large size switch gear)



● **Control center** (small size switch gear)

● **Other training equipment**
• Motors etc.



Main Meeting Hall

Used for meetings and studying as well as for lectures and discussions. Accordingly, the hall has audiovisual systems.

The training center also has study rooms for the education and training of small groups.



- ① Study room #204
- ② Study room #203
- ③ Study room #202
- ④ Study room #201
- ⑤ Radiation control equipment practical training room
- ⑥ Electrical equipment practical training room
- ⑦ Control equipment study room
- ⑧ Control equipment practical training room
- ⑨ Waiting room for instructors
- ⑩ Manager's room
- ⑪ Reception room
- ⑫ Office
- ⑬ Main Meeting Hall
- ⑭ Mechanical equipment practical training room
- ⑮ Viewing room
- ⑯ Operation simulator room
- ⑰ Instructor's room
- ⑱ Simulator study room
- ⑲ Simulator computer room
- ⑳ Model display room
- ㉑ Fuel handling equipment simulator room
- ㉒ Non-destructive inspection practical training room
- ㉓ Practical training room for welding
- ㉔ Electrical equipment room



2F



1F

Sendai Nuclear Power Station



Noted Place Ruins

① Nitta shrine

In the center of town there is a mountain called "Kamikame" which is next to "Enosanryou". The Nitta Shrine which worshiped "Niniginomikoto" was once called "Satsumaichinomiya". Copper of mirror and Nitta Shrine's documents has been designated as one of the most important cultural asset including the mask of god which are precious in history.

② Taiheiji Temple

Taiheiji Temple was built by "Genmei Emperor of Chokuganji Temple from Nara's time period. 15TH year of Tensho age, Hideyoshi Toyotomi used this temple to get the lands of Kyushu as he welcomed Yoshihisa Shimazu for peace offer negotiation. Inside the temple there is a monument, and designated as a cultural asset of SatsumaSendai City.

③ Satsuma kokubunji Temple Ruins (Historical park)

Satsuma kokubunji Temple Ruins (Historical Park) is one of the first parks in kyushu with a total land area of 16,449 m. There is a park now where the Pagoda once stood.

④ Sendai Nuclear Power Station Exhibition

You will be able to get a better understanding on how the Nuclear Power Station System works. Around The Power Plant it offers a beautiful view.

⑤ Historical Material Museum

In the Museum there is a model of "Shosouin" which is the high floor style storehouse. The museum offers a lot of important and historical materials which must be passed down to the people in Sendai so these materials are on display.

⑥ Terayama Recreation Center

The park is located on top of a hill where you can see SatsumaSendai City to Kirishima Mountain range from elevation of 247meters.

⑦ Karahama Camp And Swimming Area

In the beaches of karahama where you can see 2km of beautiful views and sandy beaches, there is a campsite available.

⑧ Nishikata Swimming Area

From Nishikata Station along route3, it's a 5 minute walk. All year long you can see surfer who enjoy surfing in the beach.

⑨ Doll Rock

There is a strange rock called "Doll Rock" in the west side of the beach. In late afternoon backlighting the "Doll Rock" is beautiful in natural art.

Festival

● Rice planting Festival (the 1st Sunday in june)

This festival is the shrine's oldest event. At the rice planting festival they dance a certain dance called "Yakko Dance" it was designated as prefecture intangible cultural asset.

● Sendai River Fireworks Festival

Million shots of fireworks goes up into the skies of Sendai River. It's almost like watching The Niagara Falls falling down into the river. Under water fireworks are the special fireworks which you will find amazed. From kagoshima City there is a special decorated train you can take, to the river which you will find enjoyable.

● Sendai Greatest Rope Pulling Contest

The famous rope contest started when Yoshihisa's brother, Yoshihiro wanted to build up the soldiers fighting spirits so this is a traditional event that continued for more than 400 years ago. Length of the rope is 365 meters long and it's weight 5 tons, 3 thousand man power is necessary to do this rope pulling contest. It makes you understand the spirits of the fighting of their soldiers.

● Sendai Hanya Matsuri

Every 3rd of November more than 5,000 dancers dressed in colorful traditional cotton kimono and men dressed in Samurai outfit gather to parade through the street, and much more different event going on. The whole SatsumaSendai City enjoys the festival.

Kyushu Electric Power Co.,Inc. Sendai Nuclear Power Station Nuclear Power Training Center

1765-3. Aza Katahirayama. Gumizaki-cho. SatsumaSendai City
Kagoshima. 895-0132

TEL:+81-(0)996-27-3111 (main number)
FAX:+81-(0)996-27-3131



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