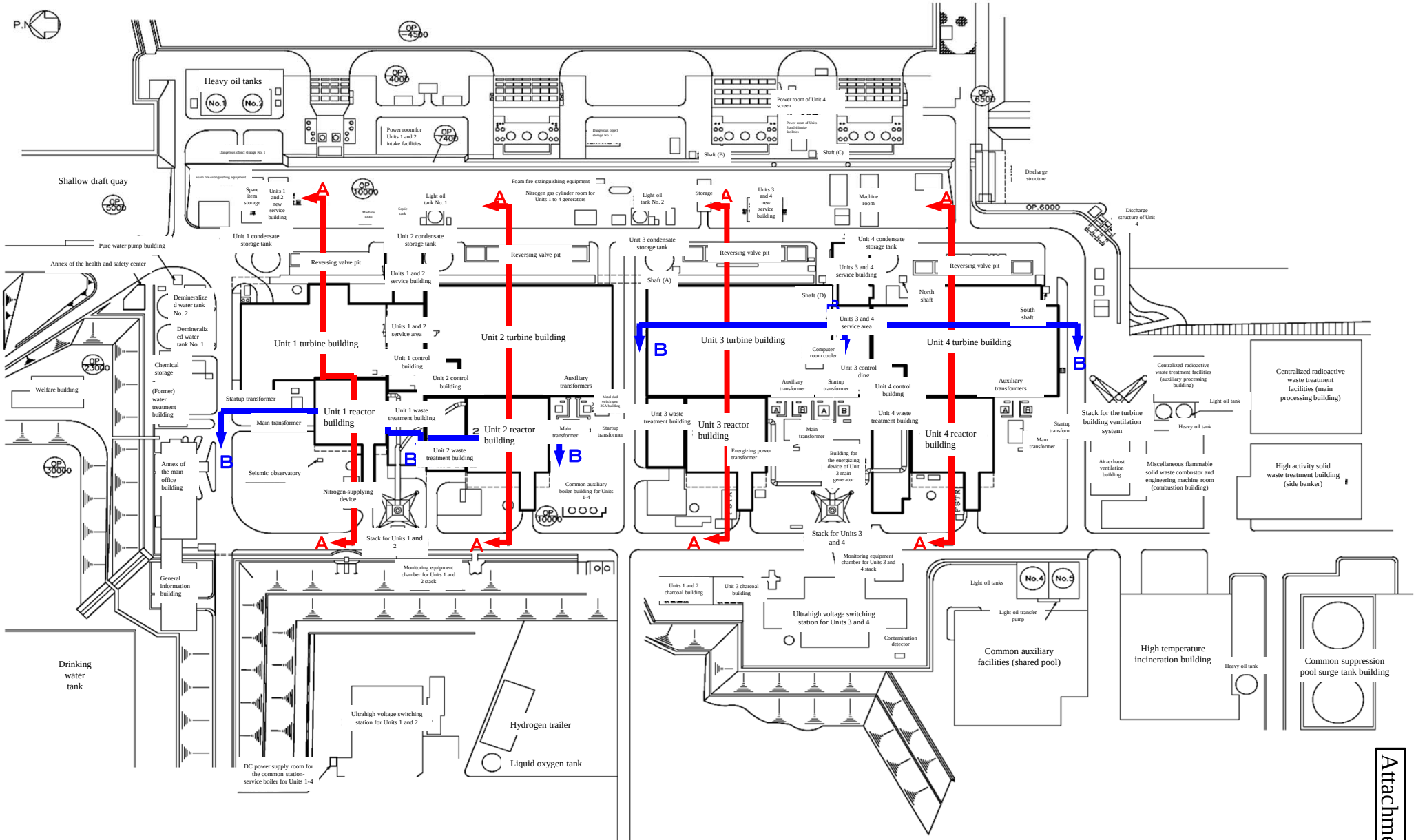
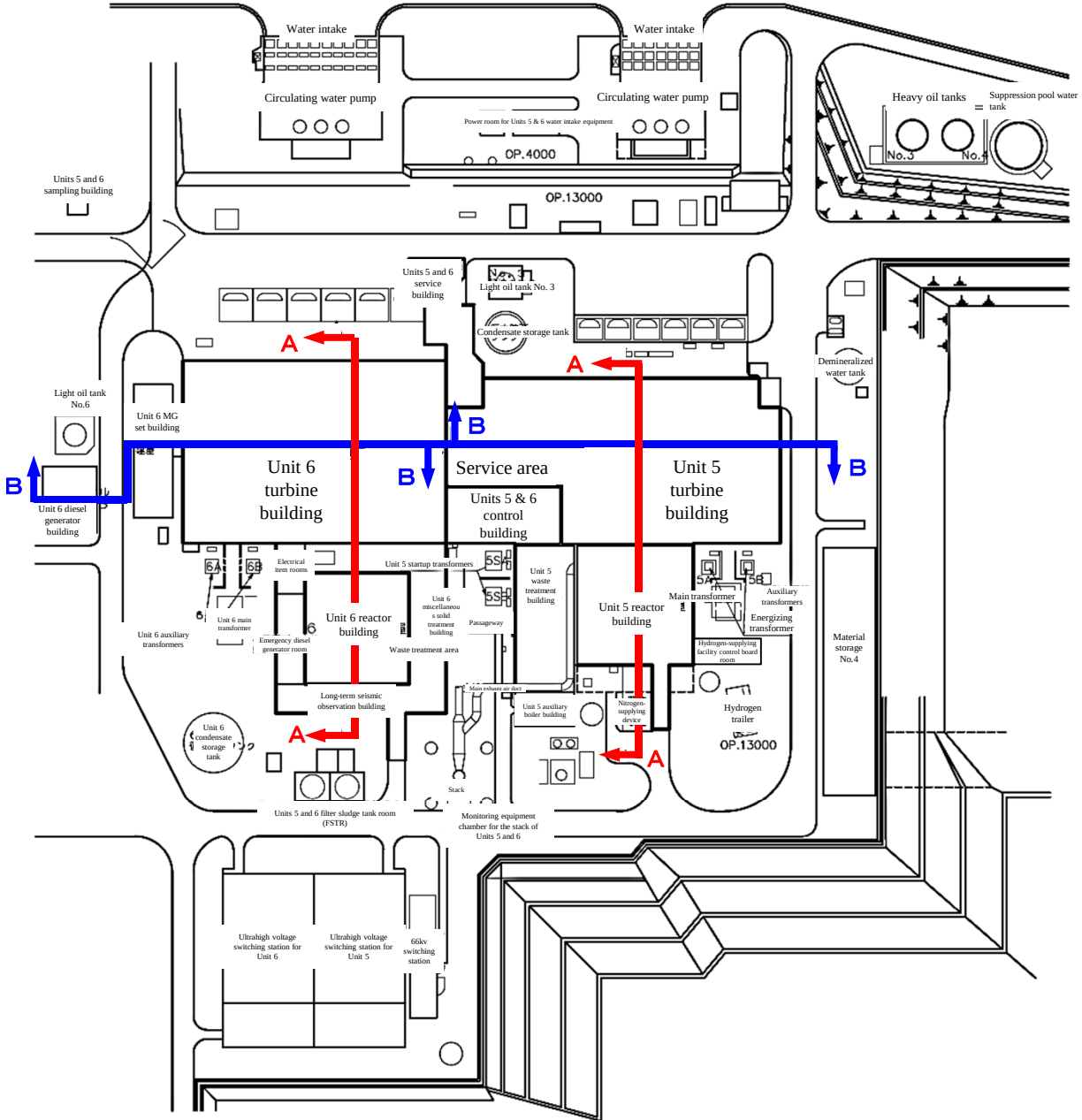


Sectional lines are referred to from the preparation of sectional views of the reactor building and other facilities at Units 1 to 4 of the Fukushima Dai-ichi NPS

Based on data and documents by Tokyo Electric Power Company

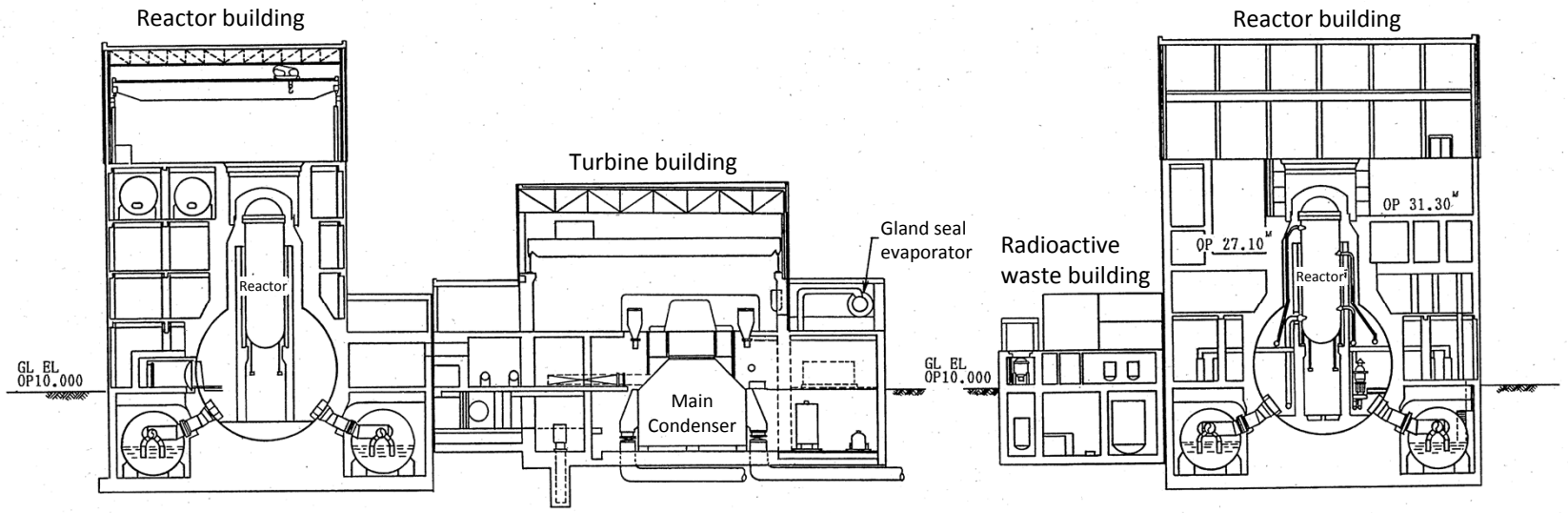
Attachment II-15



Sectional lines are referred to from the preparation of sectional views of the reactor building and other facilities at Units 5 and 6 of the Fukushima Dai-ichi NPS

Based on data and documents by Tokyo Electric Power Company

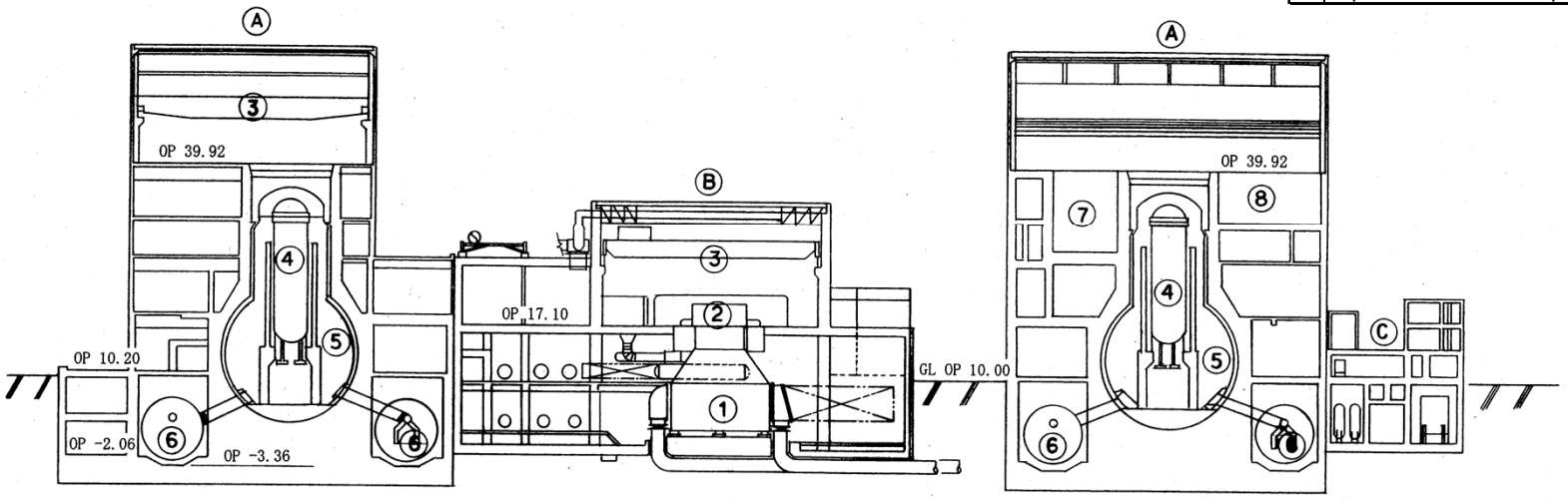
Sectional view of the reactor building and other facilities at Unit 1 of the Fukushima Dai-ichi NPS



Source: Tokyo Electric Power Company, "Fukushima Dai-ichi NPS: Application for reactor alternation license," April 2002

Sectional view of the reactor building and other facilities at Unit 2 of the Fukushima Dai-ichi NPS

A	Reactor building	1	Condenser
B	Turbine building	2	Turbine generator
C	Radioactive waste building	3	Crane
		4	Reactor
		5	Drywell
		6	Suppression chamber
		7	Fuel storage pool
		8	Storage pool for the steam separator and other equipment

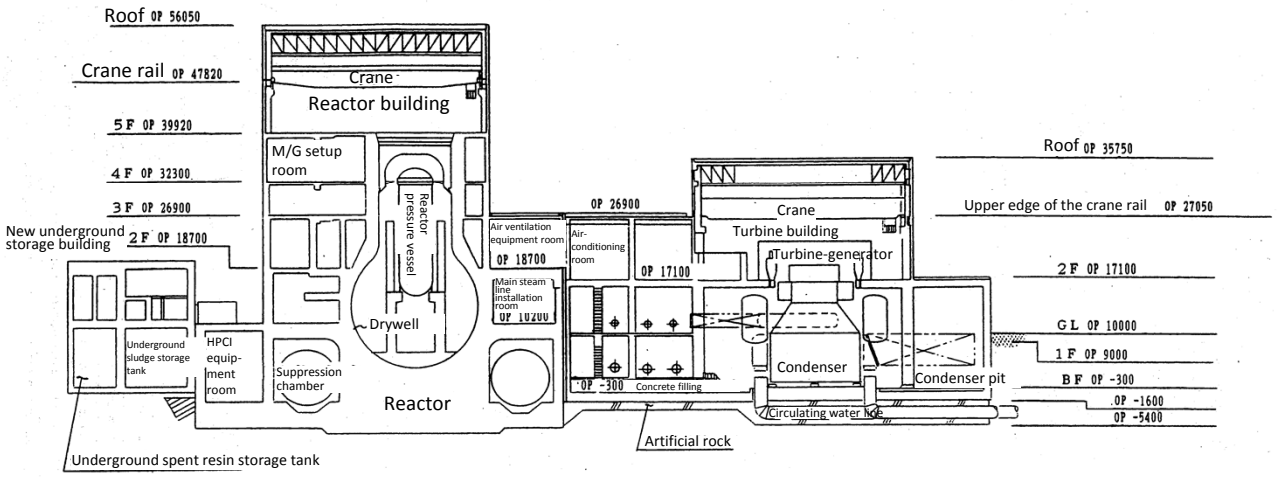


Section A-A

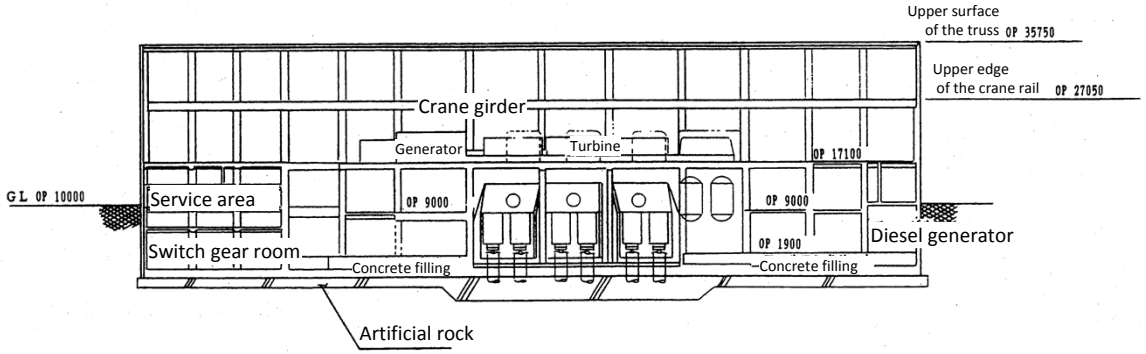
Section B-B

Source: Tokyo Electric Power Company, “Fukushima Dai-ichi NPS: Application for reactor alternation license,” April 2002

Sectional view of the reactor building and other facilities at Unit 3 of the Fukushima Dai-ichi NPS



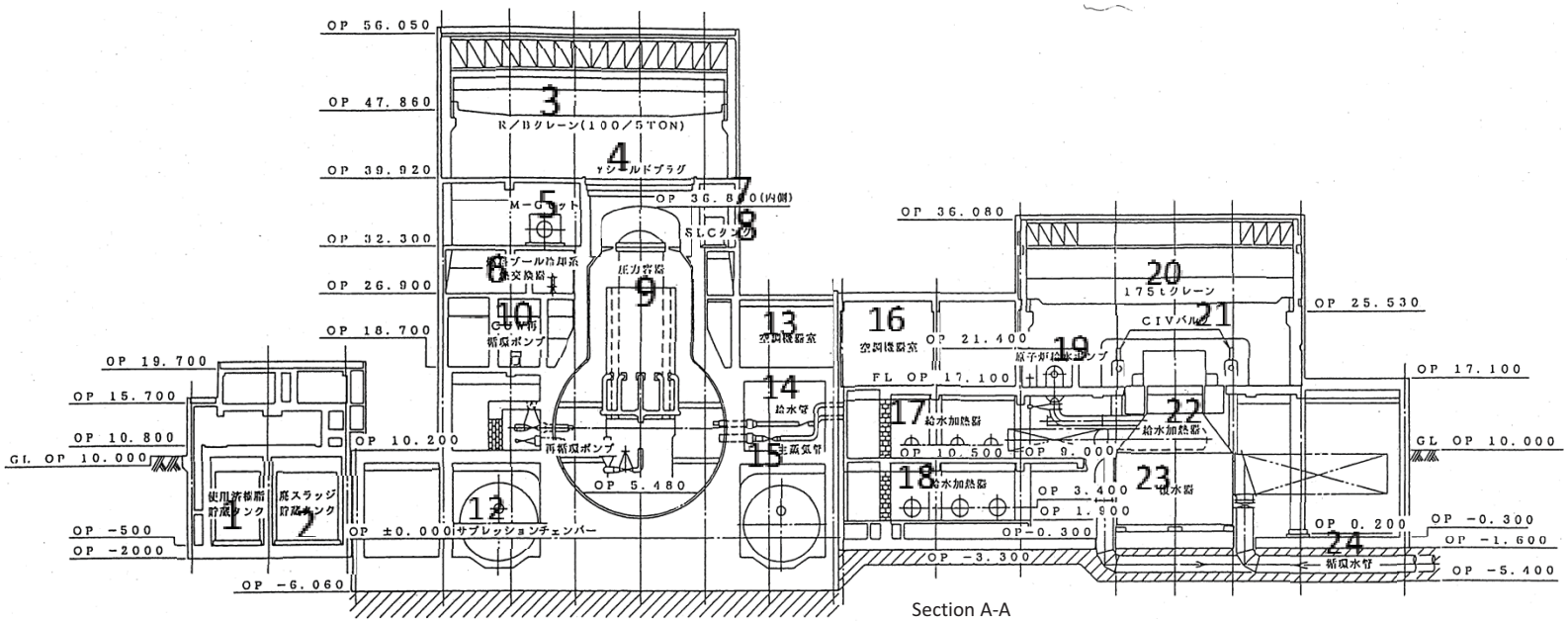
Section A-A



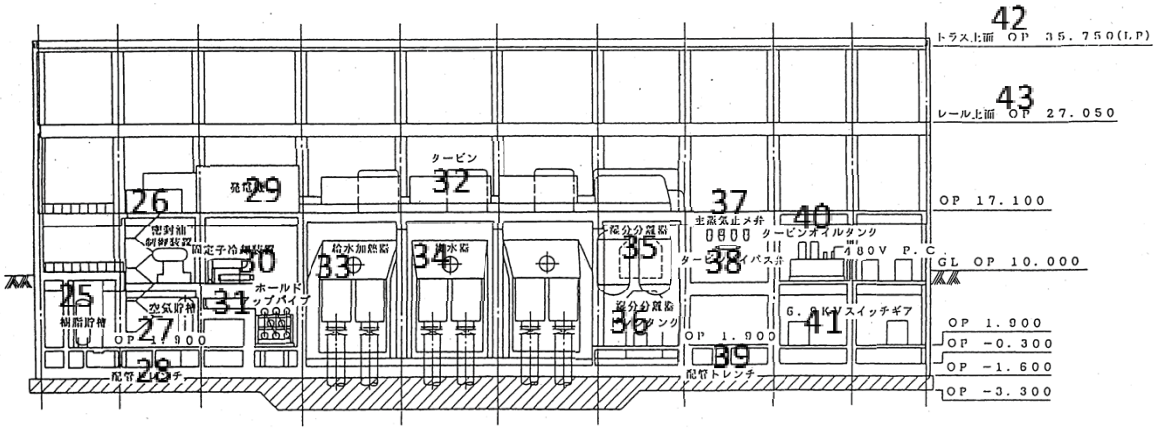
Section B-B

Based on “Fukushima Dai-ichi NPS: Application for reactor alternation license” (June 2003) by Tokyo Electric Power Company

Sectional view of the reactor building and other facilities at Unit 4 of the Fukushima Dai-ichi NPS



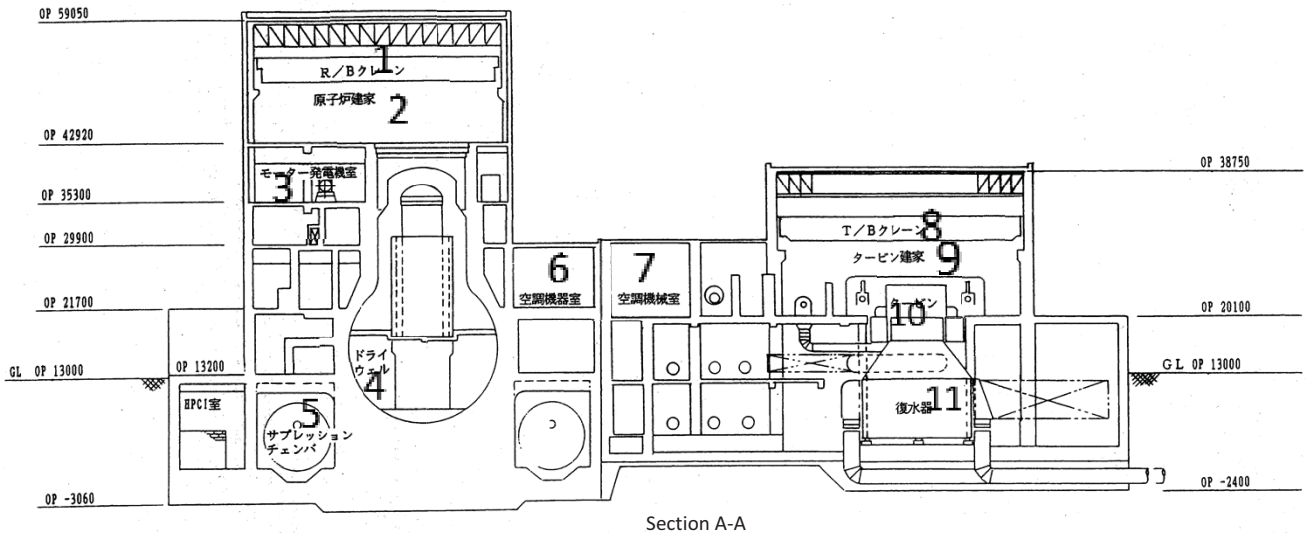
Section A-A



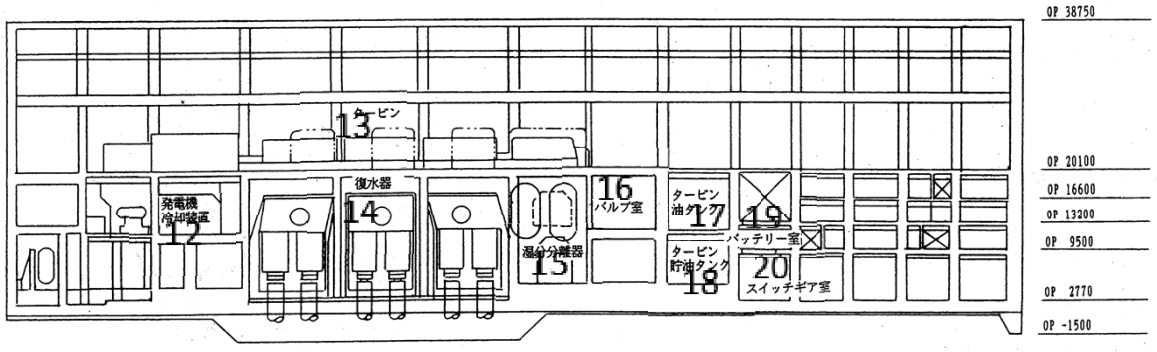
Section B-B

Based on “Fukushima Dai-ichi NPS: Application for reactor alternation license” (June 2003) by Tokyo Electric Power Company

Sectional view of the reactor building and other facilities at Unit 5 of the Fukushima Dai-ichi NPS



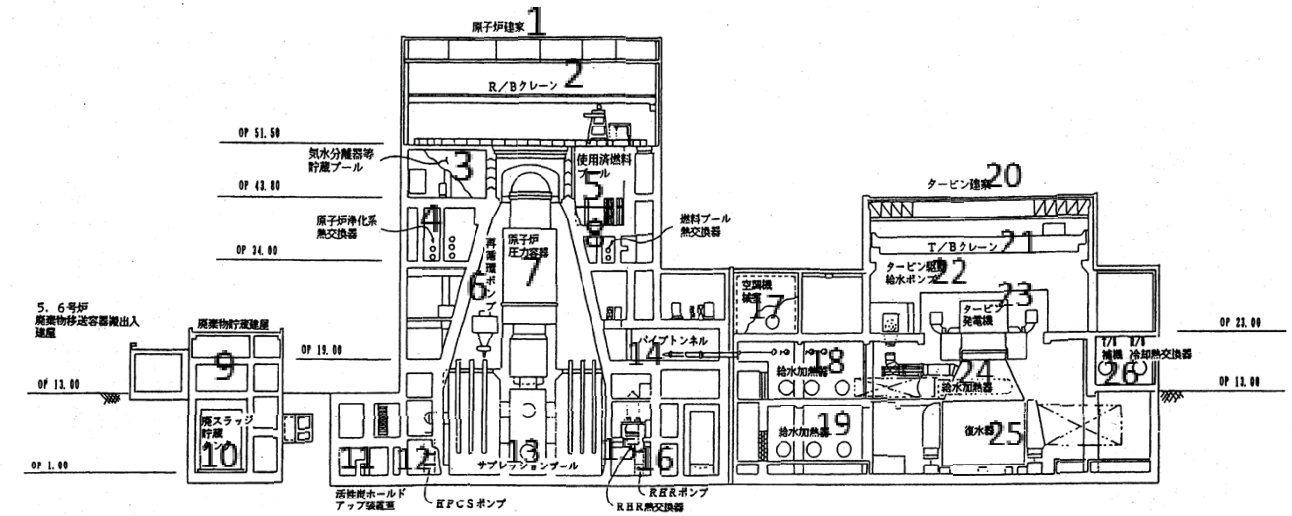
Section A-A



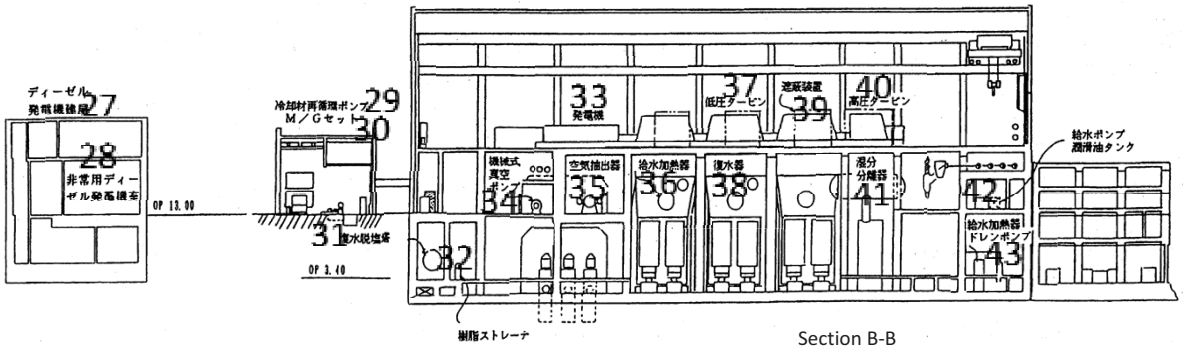
Section B-B

Based on “Fukushima Dai-ichi NPS: Application for reactor alternation license” (June 2003) by Tokyo Electric Power Company

Sectional view of the reactor building and other facilities at Unit 6 of the Fukushima Dai-ichi NPS



Section A-A



Section B-B

Source: Tokyo Electric Power Company, “Fukushima Dai-ichi NPS: Application for reactor alternation license,” December 2010

福島第一原子力発電所における 4 号機の原子炉建屋等の断面図:Sectional view of the reactor building and other facilities at Unit 4 of the Fukushima Dai-ichi NPS

上図　左　⇒　右

①使用済樹脂貯蔵タンク：Spent resin storage tank
②廃スラッジ貯蔵タンク：Waste sludge storage tank
③Ｒ／Ｂクレーン（１００／５ＴＯＮ）：R/B crane (100/5 ton)
④γシールドプラグ：Gamma shield plug
⑤Ｍ－Ｇセット：M/G set
⑥燃料プール冷却系熱交換器：Heat exchanger of the fuel pool cooling system
⑦ＯＰ　３６，８００(内側)：OP 36,800 (interior side)
⑧ＳＬＣタンク：SLC tank
⑨圧力容器：Pressure vessel
⑩ＣＵＷ再循環ポンプ：CUW recirculation pump
⑪再循環ポンプ：recirculation pump
⑫サプレッションチェンバ：Suppression chamber
⑬空調機器室：Air-conditioning equipment room
⑭給水管：Feedwater line
⑮主蒸気管：Main steam line
⑯空調機器室：Air-conditioning equipment room
⑰給水加熱器：Feedwater heater
⑱給水加熱器：Feedwater heater
⑲原子炉給水ポンプ：Reactor feed water pump
⑳１７５ｔクレーン：175-ton crane
㉑ＣＩＶバルブ：CIV valve
㉒給水加熱器：Feedwater heater
㉓復水器：Condenser
㉔循環水管：Circulating water line

下図　左　⇒　右

㉕樹脂貯槽：Resin reservoir
㉖密封油制御装置：Seal oil control system
㉗空気貯槽：Air reservoir
㉘配管トレンチ：Pipe trench
㉙発電機：Generator

㉚固定予冷却装置：Fixed pre-cooling unit
㉛ホールドアップパイプ：Holdup pipes
㉜タービン：Turbine
㉝給水加熱器：Feedwater heater
㉞復水器：Condenser
㉟湿分分離器：Moisture separator
㊱湿分分離器ドレンタンク：Moisture separator drain tank
㊲主蒸気止メ弁：Main steam stop valve
㊳タービンバイパス弁：Turbine bypass valve
㊴配管トレンチ：Pipe trench
㊵タービンオイルタンク：Turbine oil tank
㊶６．９ｋｖスイッチギア：6.9 kV switch gear
㊷トラス上面：Upper surface of the truss
㊸レール上面：Upper surface of the rail

福島第一原子力発電所における 5 号機の原子炉建屋等の断面図:Sectional view of the reactor building and other facilities at Unit 5 of the Fukushima Dai-ichi NPS

上図　左　⇒　右
①Ｒ／Ｂクレーン：R/B crane
②原子炉建屋：Reactor building
③モーター発電機室：Motor-driven generator room
④ドライウェル：Drywell
⑤サプレッションチェンバ：Suppression chamber
⑥空調機器室：Air-conditioning equipment room
⑦空調機器室：Air-conditioning equipment room
⑧Ｔ／Ｂクレーン：T/B crane
⑨タービン建屋：Turbine building
⑩タービン：Turbine
⑪復水器：Condenser

下図　左　⇒　右
⑫発電機冷却装置：Generator cooling unit

⑬タービン：Turbine
⑭復水器：Condenser
⑮湿分分離器：Moisture separator
⑯バルブ室：Valve room
⑰タービン油タンク：Turbine oil tank
⑱タービン貯油タンク：Turbine oil storage tank
⑲バッテリー室：Battery room
⑳スイッチギア室：Switch gear room

福島第一原子力発電所における６号機の原子炉建屋等の断面図：Sectional view of the reactor building and other facilities at Unit 6 of the Fukushima Dai-ichi NPS

上図　左　⇒　右
①原子炉建屋：Reactor building
②Ｒ／Ｂクレーン：R/B crane
③気水分離器等貯蔵プール：Storage pool for the steam separator and other devices
④原子炉浄化系熱交換器：Heat exchanger of the reactor cleanup system
⑤使用済燃料プール：Cartridge cooling pond
⑥再循環ポンプ：Recirculation pump
⑦原子炉圧力容器：Reactor pressure vessel
⑧燃料プール熱交換器：Fuel pool heat exchanger
⑨廃棄物貯蔵建屋：Waste storage building
⑩廃スラッジ貯蔵タンク：Waste sludge storage tank
⑪活性炭ホールドアップ装置室：Charcoal equipment room
⑫ＨＰＣＳポンプ：HPCS pump
⑬サプレッションプール：Suppression pool
⑭パイプトンネル：Pipe tunnel
⑮ＲＨＲ熱交換器：RHR heat exchanger
⑯ＲＨＲポンプ：RHR pump
⑰空調機械室：Air-conditioning machine room
⑱給水加熱器：Feedwater heater
⑲給水加熱器：Feedwater heater
⑳タービン建屋：Turbine building
㉑Ｔ／Ｂクレーン：T/B crane

㉒タービン駆動給水ポンプ：Turbine-driven feedwater pump
㉓タービン発電機：Turbine-generator
㉔給水加熱器：Feedwater heater
㉕復水器：Condenser
㉖補機冷却熱交換器：Component cooling heat exchanger

下図　左　⇒　右

㉗ディーゼル発電機建屋：Diesel generator building
㉘非常用ディーゼル発電機室：Emergency diesel generator room
㉙冷却材再循環ポンプ：Recirculation internal pump
㉚M／Gセット：M/G set
㉛復水脱塩搭：Condensate demineralization tower
㉜樹脂ストレーナ：Resin strainer
㉝発電機：Generator
㉞機械式真空ポンプ：Mechanical vacuum pump
㉟空気抽出器：Air ejector
㊱給水加熱器：Feedwater heater
㊲低圧タービン：Low-pressure turbine
㊳復水器：Condenser
㊴遮蔽装置：Shielding device
㊵高圧タービン：High-pressure turbine
㊶湿分分離器：Moisture separator
㊷給水ポンプ潤滑油タンク：Lubricant oil tank of the feedwater pump
㊸給水加熱器ドレンポンプ：Heater drain pump

Attachment II-16

Photographs showing damage to the Unit 1 reactor building

East wall

March 24, 2011
Photographed by Tokyo Electric Power Company

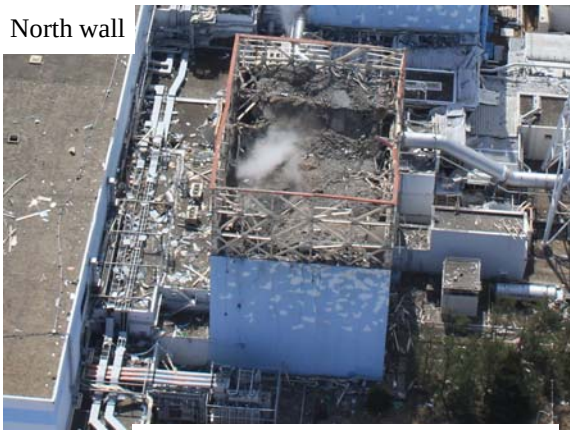
West wall

March 24, 2011
Photographed by Tokyo Electric Power Company

South wall

March 24, 2011
Photographed by Tokyo Electric Power Company

North wall



March 24, 2011
Photographed by Tokyo Electric Power Company

Photographs showing damage to the Unit 1 reactor building

March 12, 2011
Photographed by Tokyo Electric Power Company

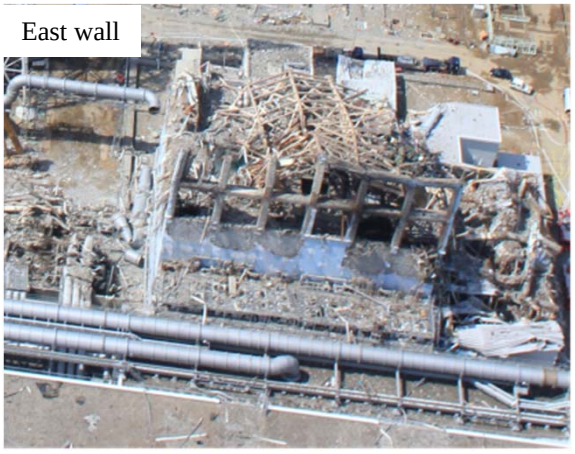
May 22, 2011
Photographed by Tokyo Electric Power Company

April 14, 2011
Photographed by Tokyo Electric Power Company

April 15, 2011
Photographed by Tokyo Electric Power Company

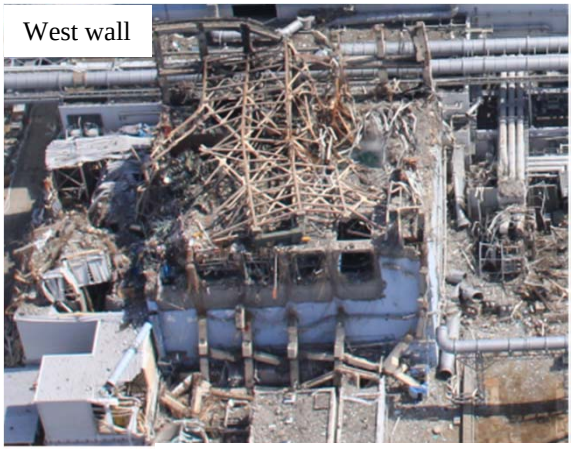
Photographs showing damage to the Unit 3 reactor building

East wall



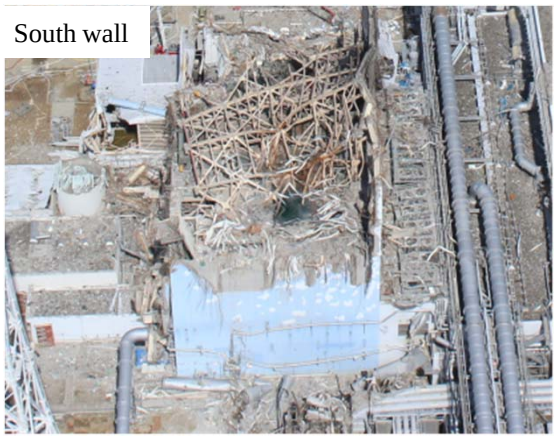
March 24, 2011
Photographed by Tokyo Electric Power Company

West wall



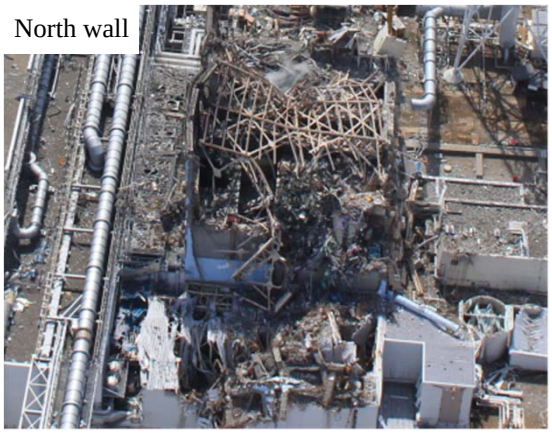
March 24, 2011
Photographed by Tokyo Electric Power Company

South wall



March 24, 2011
Photographed by Tokyo Electric Power Company

North wall



March 24, 2011
Photographed by Tokyo Electric Power Company

Photographs showing damage to the Unit 4 reactor building

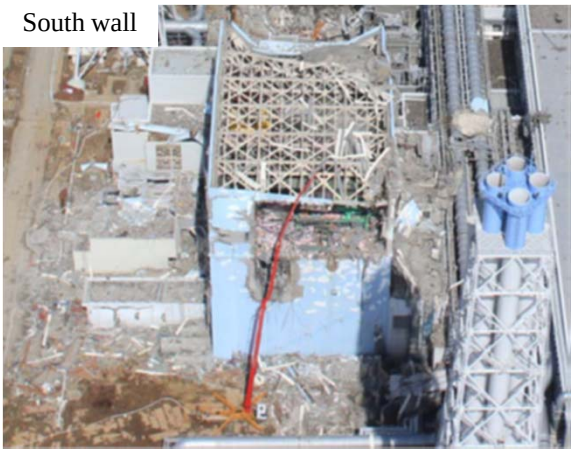
East wall

March 24, 2011
Photographed by Tokyo Electric Power Company

West wall

March 24, 2011
Photographed by Tokyo Electric Power Company

South wall



March 24, 2011
Photographed by Tokyo Electric Power Company

North wall

March 24, 2011
Photographed by Tokyo Electric Power Company

Photographs showing damage to the Unit 4 reactor building

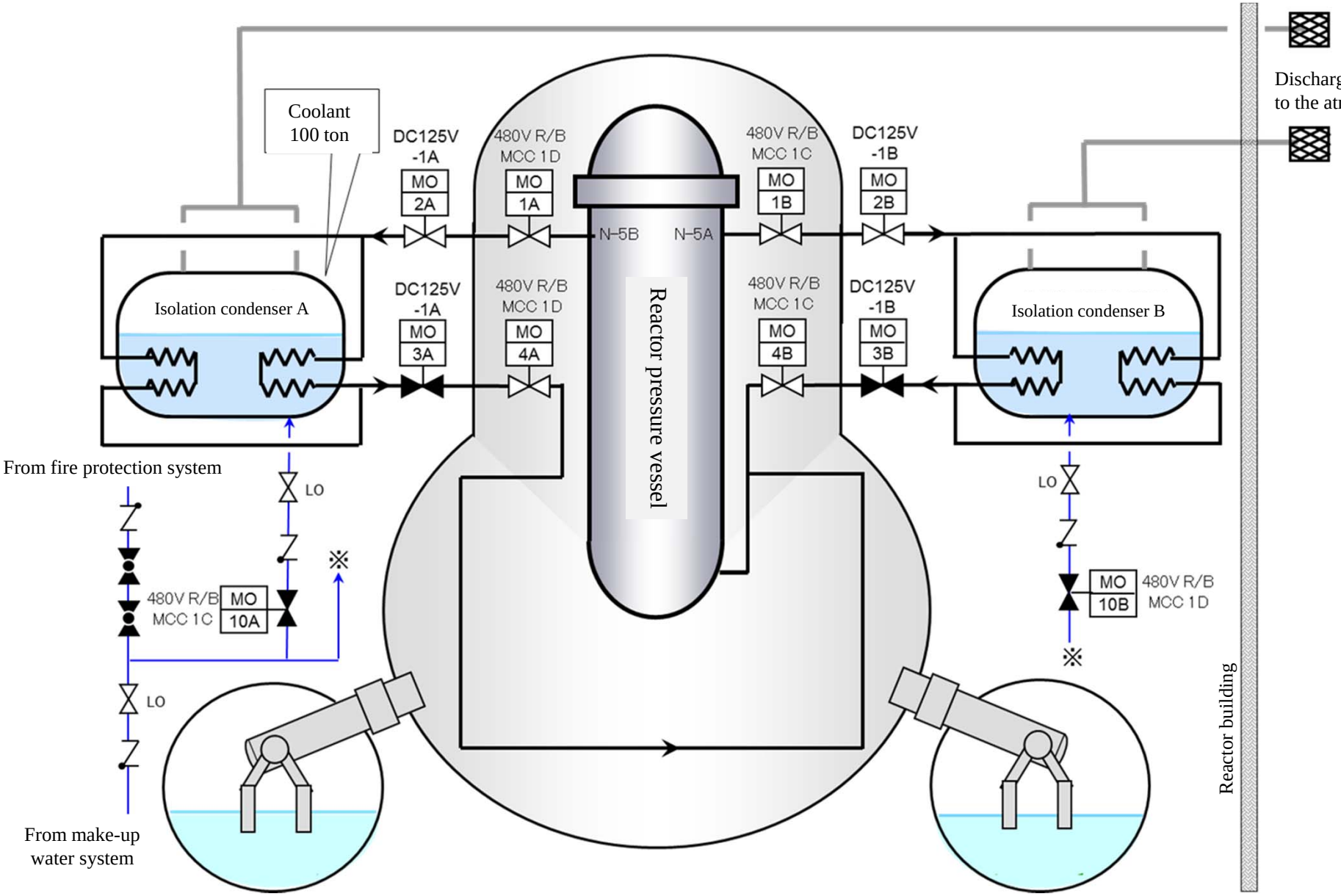
March 24, 2011
Photographed by Tokyo Electric Power Company

March 24, 2011
Photographed by Tokyo Electric Power Company

March 24, 2011
Photographed by Tokyo Electric Power Company

March 24, 2011
Photographed by Tokyo Electric Power Company

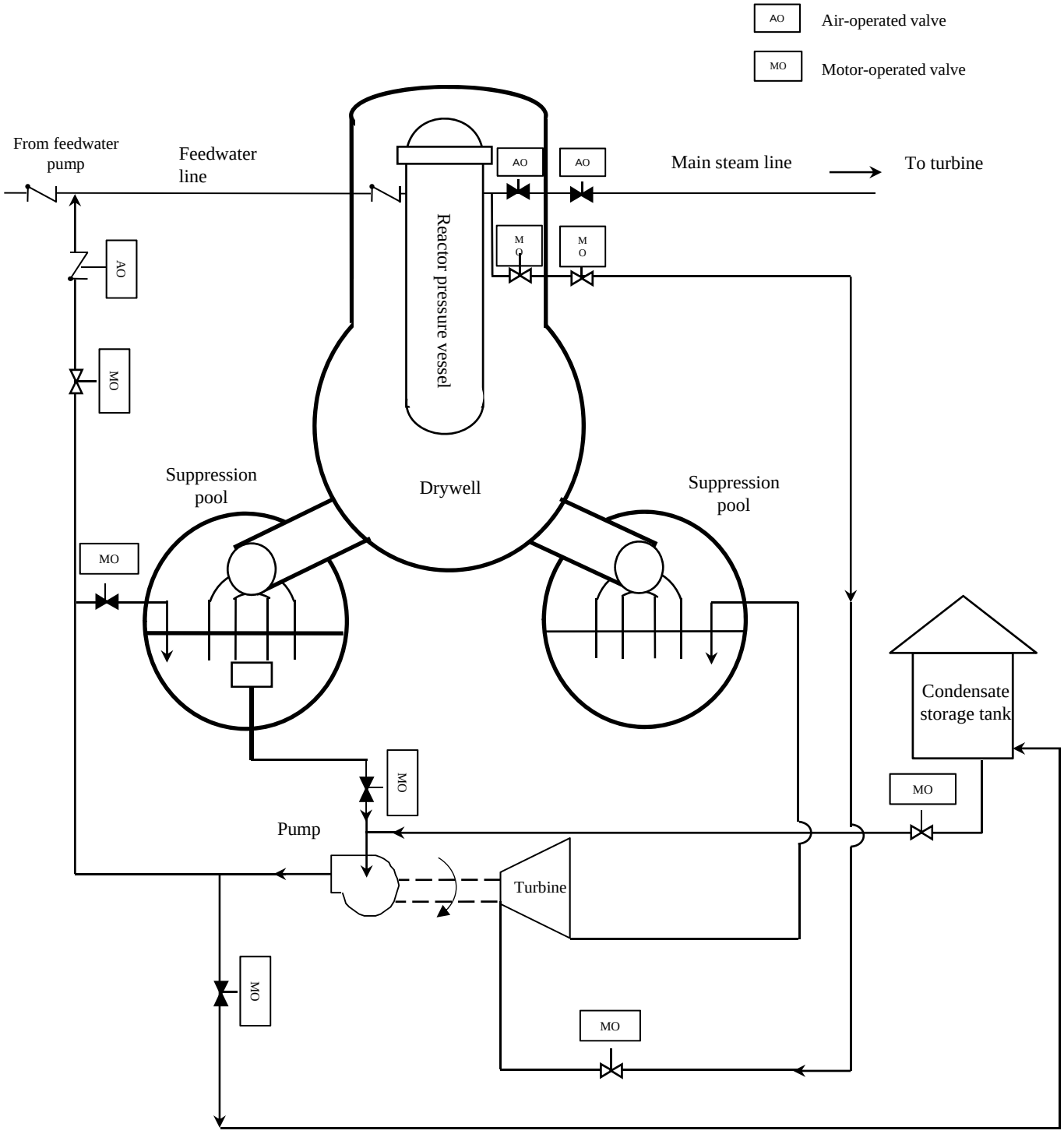
Isolation Condenser (IC)



Created by Tokyo Electric Power Company

Attachment II-17

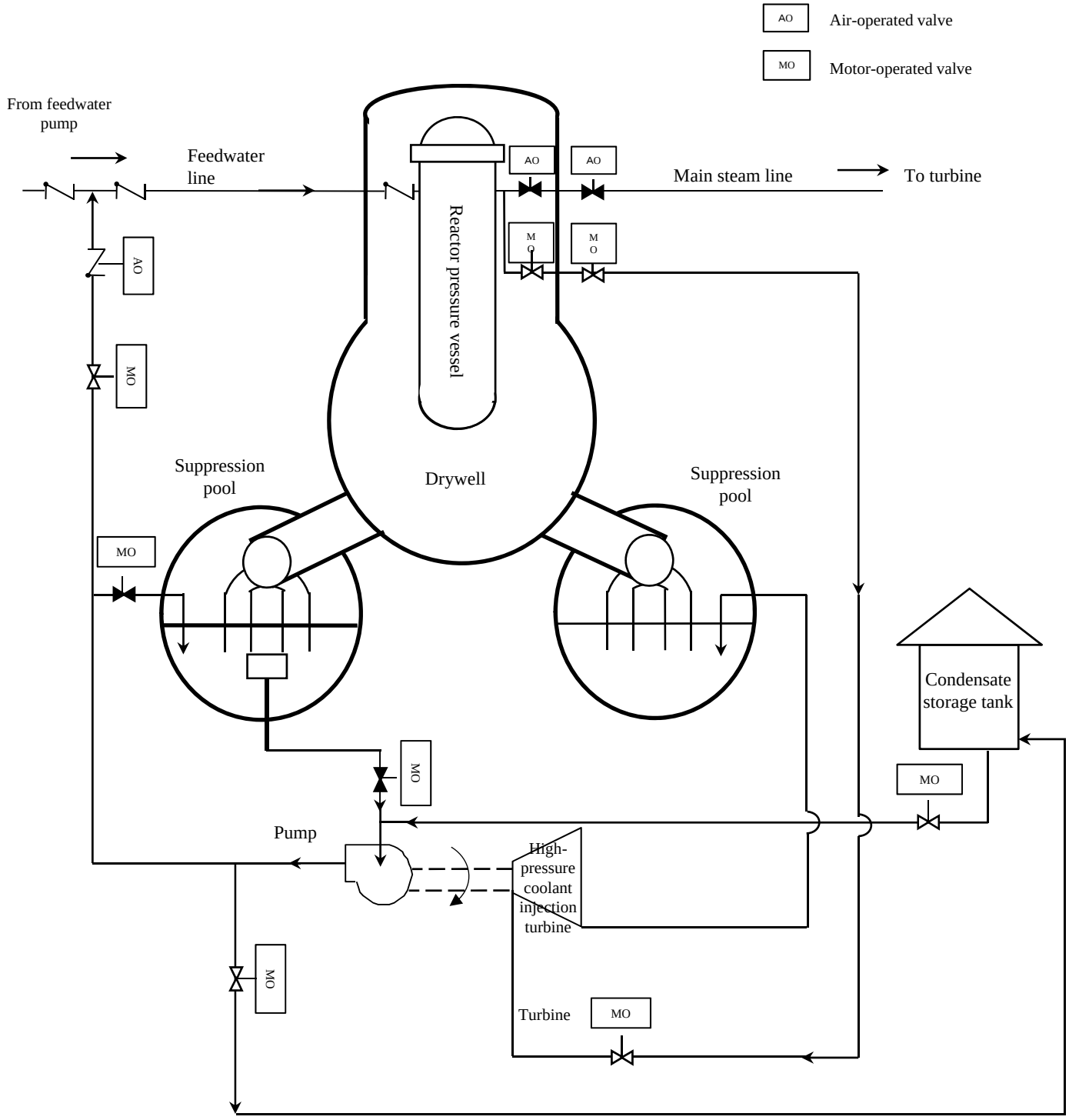
Attachment II-18



Reactor core isolation cooling (RCIC) system

Based on “Fukushima Dai-ichi NPS: Application for permit for changes to reactor establishment” (June 2003) by Tokyo Electric Power Company

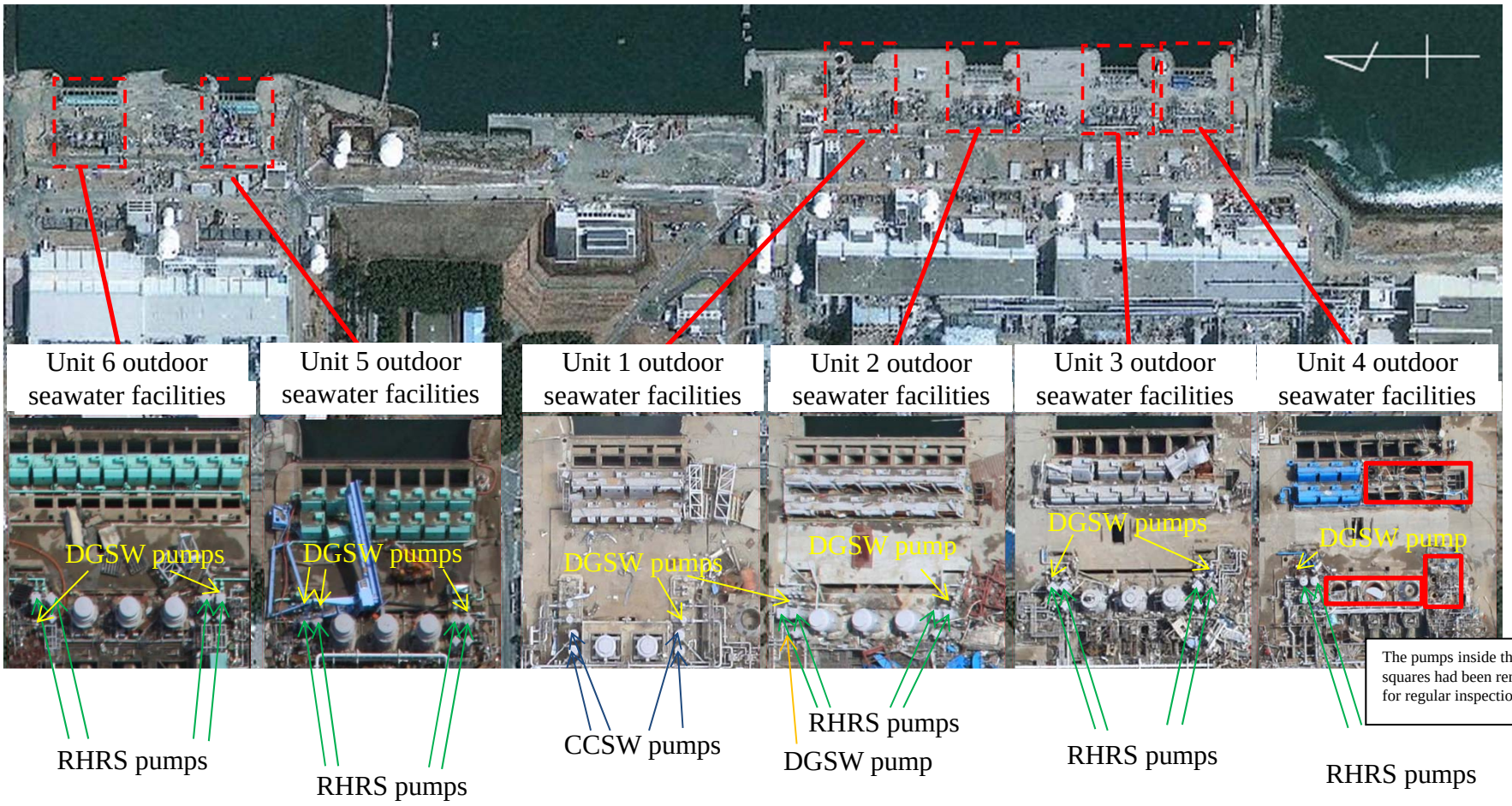
Attachment II-19



High pressure coolant injection (HPCI) system

Based on “Fukushima Dai-ichi NPS: Application for permit for changes to reactor establishment” (June 2003) by Tokyo Electric Power Company

Photograph showing an overview of the seaside area and outdoor seawater facilities at the Fukushima Dai-ichi NPS



RHRS: Residual heat removal sea water system
CCSW: Containment cooling sea water system
DGSW: Diesel generator sea water system

The aerial pictures are created from photographs on GeoEye.
The six pictures in the bottom row are created from photographs taken by Tokyo Electric Power Company on March 29, 2011.

Attachment II-20

Damage to the emergency diesel generators (DGs), metal clad switchgear (M/C) and power centers (P/Cs)

Table 1. Damage to the emergency diesel generators (DGs) after the arrival of the tsunami

	Equipment	Installation location	Remarks	Equipment	Installation location	Remarks	Equipment	Installation location	Remarks	Equipment	Installation location	Remarks	Equipment	Installation location	Remarks	Equipment	Installation location	Remarks
	Unit 1			Unit 2			Unit 3			Unit 4			Unit 5			Unit 6		
DG	1A	1st basement floor, T/B	-	2A	1st basement floor, T/B	-	3A	1st basement floor, T/B	-	4A	1st basement floor, T/B	-	5A	1st basement floor, T/B	Exciters exposed to water	6A	1st basement floor, R/B	Seawater pumps exposed to water
	1B	1st basement floor, T/B	-	2B	1st floor, shared pool	M/C (2E), submerged	3B	1st basement floor, T/B	-	4B	1st floor, shared pool	M/C (4E), exposure to water	5B	1st basement floor, T/B	Exciters exposed to water	6B	1st floor, DG bldg.	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	for HPCS	1st basement floor, R/B	Seawater pumps exposed to water

Table 2. Damage to the metal clad switchgear (M/C) after the arrival of the tsunami

		Equipment	Installation location	Equipment	Installation location	Equipment	Installation location	Equipment	Installation location	Equipment	Installation location	Equipment	Installation location
		Unit 1		Unit 2		Unit 3		Unit 4		Unit 5		Unit 6	
Emergency M/C		1C	1st floor, T/B	2C	1st basement floor, T/B	3C	1st basement floor, T/B	4C	1st basement floor, T/B	5C	1st basement floor, T/B	6C	2nd basement floor, R/B
		1D	1st floor, T/B	2D	1st basement floor, T/B	3D	1st basement floor,T/B	4D	1st basement floor, T/B	5D	1st basement floor, T/B	6D	1st basement floor, R/B
		-	-	2E	1st basement floor, shared pool	-	-	4E	1st basement floor, shared pool	-	-	for HPCS	1st floor, R/B
Regular M/C	Regular	1A	1st floor, T/B	2A	1st basement floor, T/B	3A	1st basement floor, T/B	4A	1st basement floor, T/B	5A	1st basement floor, C/B	6A-1	1st basement floor, T/B
		1B	1st floor, T/B	2B	1st basement floor, T/B	3B	1st basement floor, T/B	4B	1st basement floor, T/B	5B	1st basement floor, C/B	6A-2	1st basement floor, T/B
		-	-	-	-	-	-	-	-	-	-	6B-1	1st basement floor, T/B
		-	-	-	-	-	-	-	-	-	-	6B-2	1st basement floor, T/B
	Common	1S	1st floor, T/B	2SA	1st floor, 2SA bldg.	3SA	1st basement floor, C/B	-	-	5SA-1	1st basement floor, C/B	-	-
		-	-	2SB	1st basement floor, T/B	3SB	1st basement floor, C/B	-	-	5SA-2	1st basement floor, C/B	-	-
		-	-	-	-	-	-	-	-	5SB-1	1st basement floor, C/B	-	-
		-	-	-	-	-	-	-	-	5SB-2	1st basement floor, C/B	-	-

Table 3. Damage to the power centers (P/Cs) after the arrival of the tsunami

		Equipment	Installation location	Equipment	Installation location	Equipment	Installation location	Equipment	Installation location	Equipment	Installation location	Equipment	Installation location
		Unit 1		Unit 2		Unit 3		Unit 4		Unit 5		Unit 6	
Emergency P/C		1C	1st basement floor, C/B	2C	1st floor, T/B	3C	1st basement floor, T/B	4C	1st floor, T/B	5C	1st basement floor, T/B	6C	2nd basement floor, R/B
		1D	1st basement floor, C/B	2D	1st floor, T/B	3D	1st basement floor,T/B	4D	1st floor, T/B	5D	1st basement floor, T/B	6D	1st basement floor, R/B
		-	-	2E	1st basement floor, shared pool	-	-	4E	1st basement floor, shared pool	-	-	6E	1st basement floor, DG bldg.
Regular P/C	Regular	1A	1st floor, T/B	2A	1st floor, T/B	3A	1st basement floor, T/B	4A	1st floor, T/B	5A	1st basement floor, C/B	6A-1	1st basement floor, T/B
		1B	1st floor, T/B	2A-1	1st basement floor, T/B	3B	1st basement floor, T/B	4B	1st floor, T/B	5A-1	2nd floor, T/B	6A-2	1st basement floor, T/B
		-	-	2B	1st floor, T/B	-	-	-	-	5B	1st basement floor, C/B	6B-1	1st basement floor, T/B
		-	-	-	-	-	-	-	-	5B-1	2nd floor, T/B	6B-2	1st basement floor, T/B
	Common	1S	1st floor, T/B	2SB	1st basement floor, T/B	3SA	1st basement floor, C/B	-	-	5SA	1st basement floor, C/B	-	-
		-	-	-	-	3SB	1st basement floor, C/B	-	-	5SA-1	1st basement floor, T/B	-	-
		-	-	-	-	-	-	-	-	5SB	1st basement floor, C/B	-	-

Explanatory note: The colors inside cells indicate the following:

Pink: Equipment itself was exposed to water.

Blue: Equipment was not exposed to water.

Green: Equipment itself was not exposed to water, but lost function due to water exposure of related equipment.

Gray: Under construction.

* Refer to Attachment II-3 for the location of each building, and to Attachment II-12 for the installation locations of the respective facilities inside the buildings.
* Refer to “Photographs showing damage to M/Cs and P/Cs” for the conditions of M/Cs and P/Cs of Unit 1, which were exposed to water.

Based on “The impact of Tohoku-Chihou Taiheiyo-Oki Earthquake to Nuclear Reactor Facilities at the Fukushima Dai-ichi Nuclear Power Station” (September 2011) by Tokyo Electric Power Company

Photographs showing damage to M/Cs and P/Cs

August 25, 2011 Photographed by Tokyo Electric Power Company

Picture (i): M/C on the north of the first floor, Unit 1 turbine building.
(Traces of the tsunami remain at shoulder height.)

August 25, 2011 Photographed by Tokyo Electric Power Company

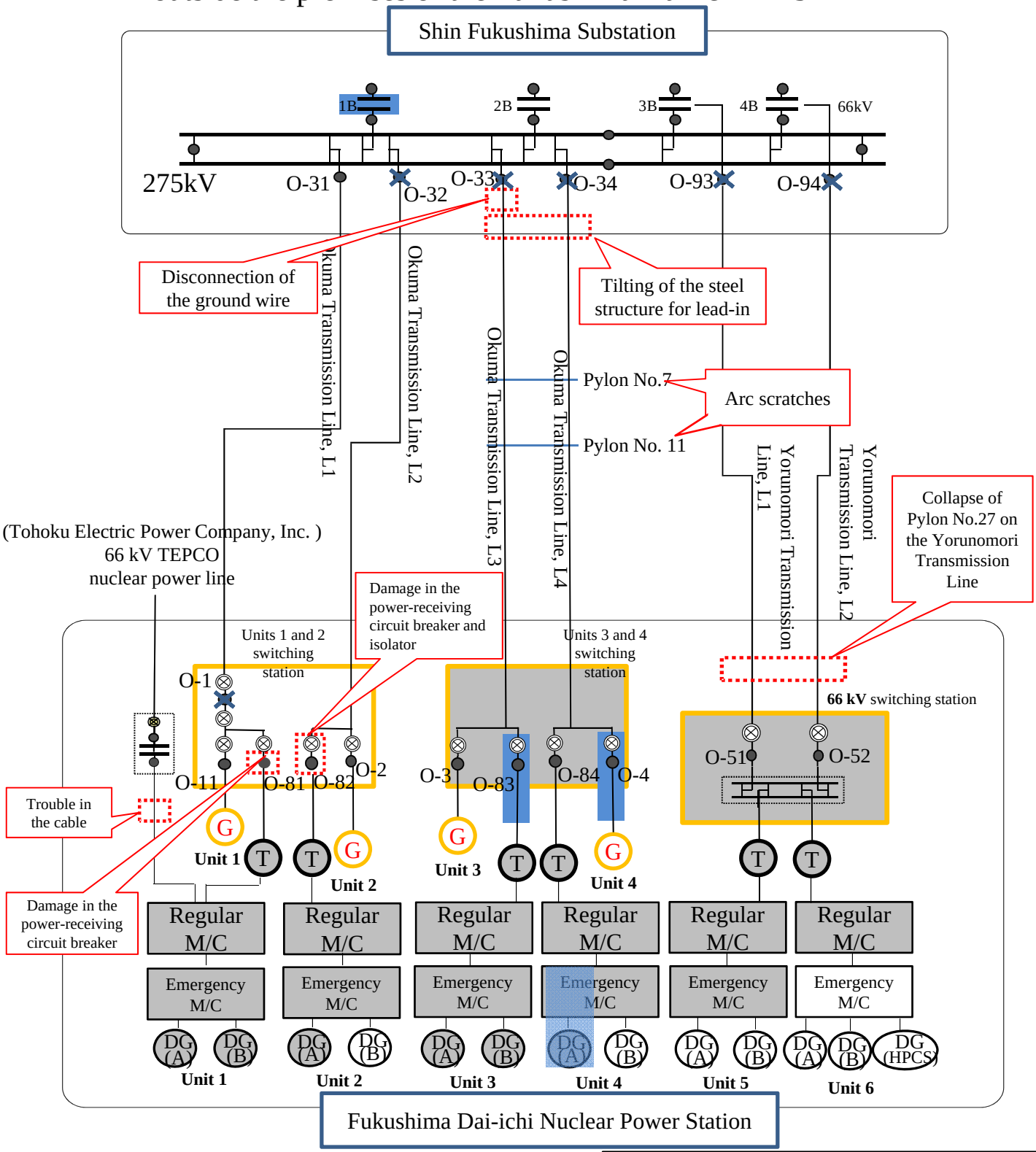
Picture (ii): M/C on the north of the first floor, Unit 1 turbine building.
(The device in the back is a breaker drawn out of the box.)

August 25, 2011 Photographed by Tokyo Electric Power Company

Picture (iii): P/C-1S on the first floor, Unit 1 turbine building.

Attachment II-22

Illustration of damage to electrical installations inside and outside the premises of the Fukushima Dai-ichi NPS



* The figure does not include L1 and L2 of the Futaba Transmission Line, the power transmission lines from Units 5 and 6, and the ultrahigh voltage switching station for Units 5 and 6 because they only serve for power transmission.

Based on "Regarding Collection of Reports Pursuant to the Provisions of Article 106, Paragraph 3 of the Electricity Business Act" (May 16, 2011) by Tokyo Electric Power Company

Explanatory note

- Isolator
- Breaker
- Startup transformer
- Power generator
- Exposed to water due to the tsunami
- Under inspection/construction
- Transformer
- Cutting point in power supply

Attachment II-23

Photographs showing damage to facilities required for the supply of external power

March 23, 2011 Photographed by Tokyo Electric Power Company

Picture (i): Breaker (O-81) having fallen inside the switching station for Units 1 and 2.

March 23, 2011 Photographed by Tokyo Electric Power Company

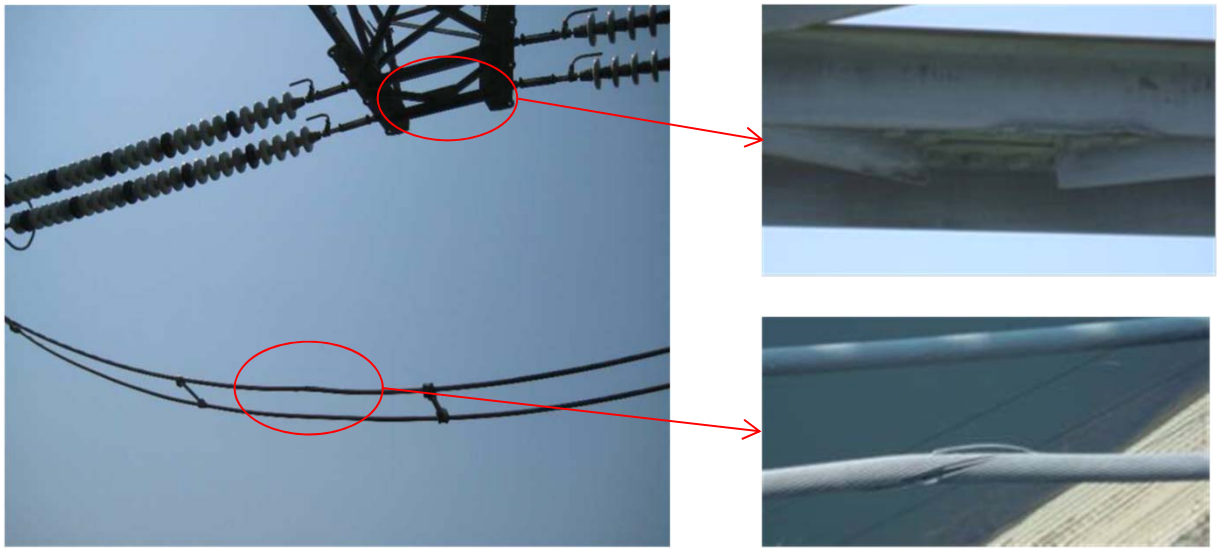
Picture (ii): Breaker (O-82) having fallen inside the switching station for Units 1 and 2.

March 23, 2011 Photographed by Tokyo Electric Power Company

Picture (iii): Disconnection switch having fallen inside the switching station for Units 1 and 2.

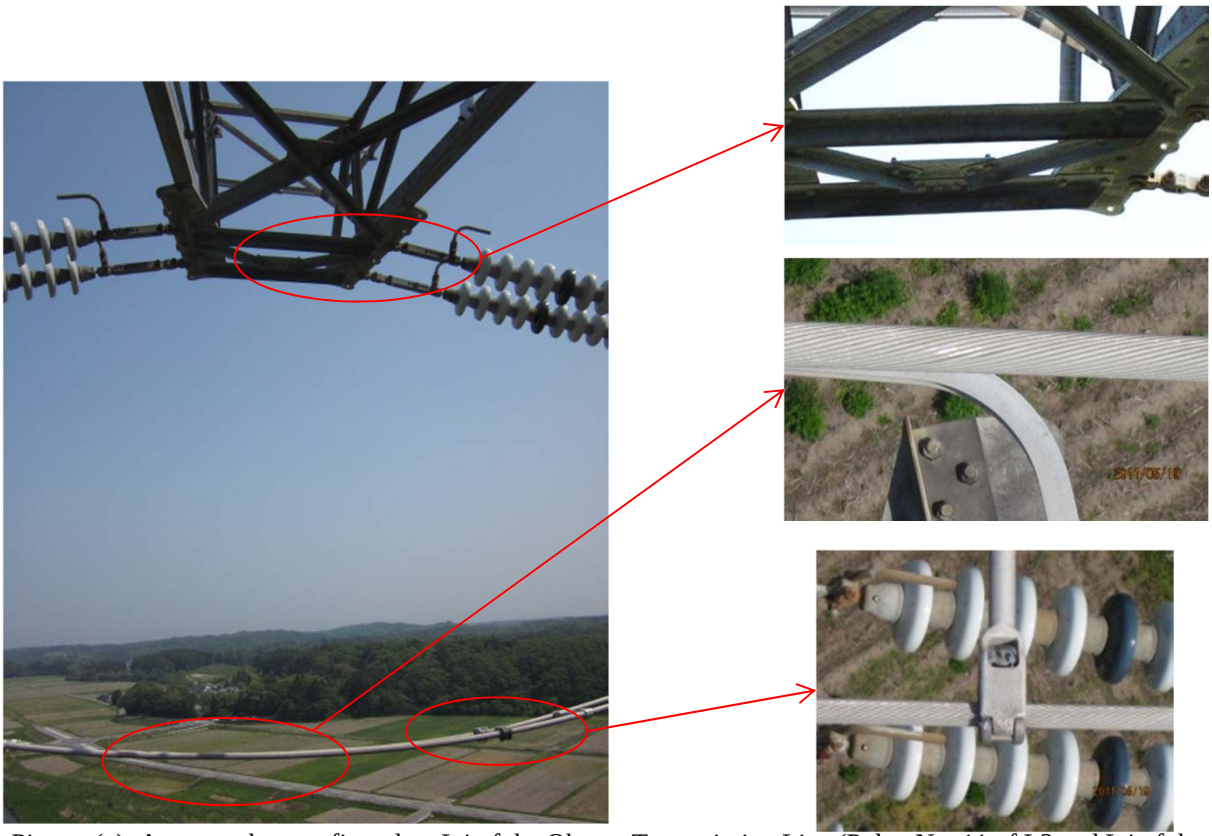
- The respective numbers for the breakers (O-81 and O-82) correspond to those in Attachment II-22.

Photographs showing damage to facilities required for the supply of external power



Picture (iv): Arc scratches confirmed on L3 of the Okuma Transmission Line (Pylon No.7 of L3 and L4 of the Okuma Transmission Line).

(May 19, 2011 Photographed by Tokyo Electric Power Company)



Picture (v): Arc scratches confirmed on L4 of the Okuma Transmission Line (Pylon No. 11 of L3 and L4 of the Okuma Transmission Line.)

(May 19, 2011 Photographed by Tokyo Electric Power Company)

*The locations of Pylons No. 7 and 11 are as indicated in L3 and L4 of the Okuma Transmission Line in Attachment II-22.

Photographs showing damage to facilities required for the supply of external power

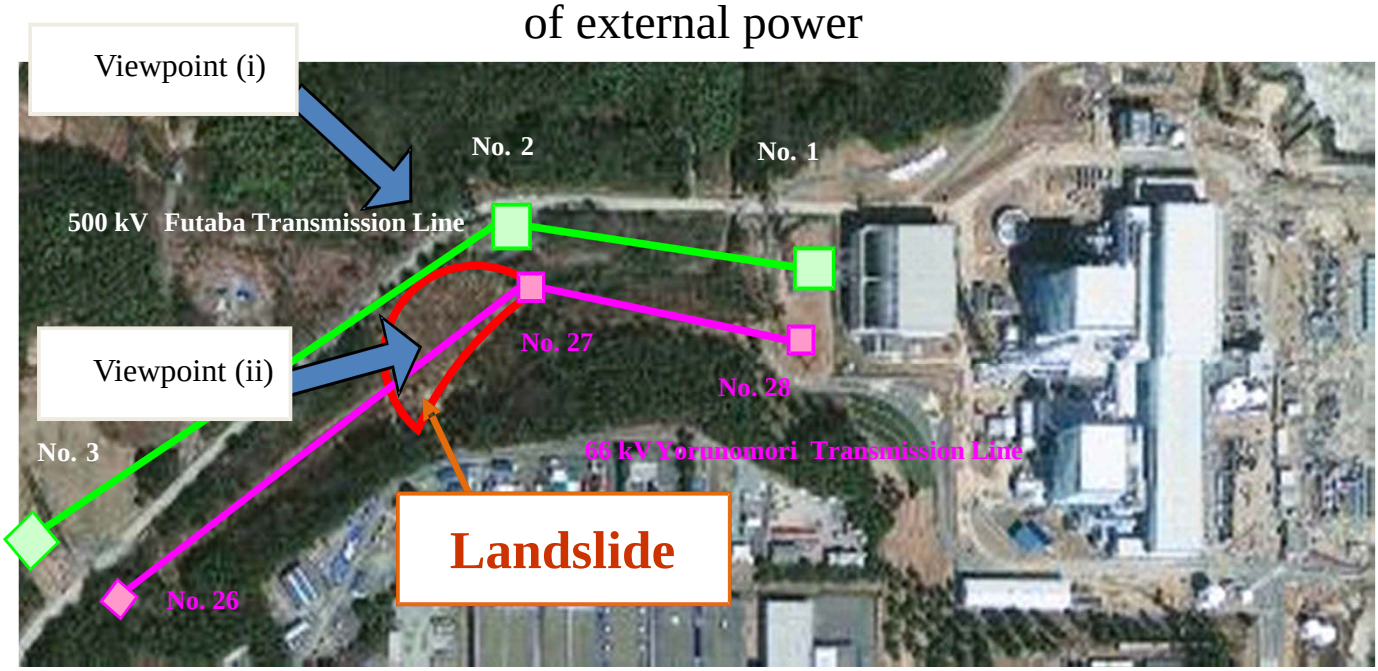
March 12, 2011 Photographed by Tokyo Electric Power Company

Picture (vi): Disconnected ground wire inside the Shin Fukushima Substation (Okuma Transmission Line, L3).

March 11, 2011 Photographed by Tokyo Electric Power Company

Picture (vii): Tilted steel structure for lead-in, Okuma Transmission Line, L3 and L4.

Photographs showing damage to facilities required for the supply of external power

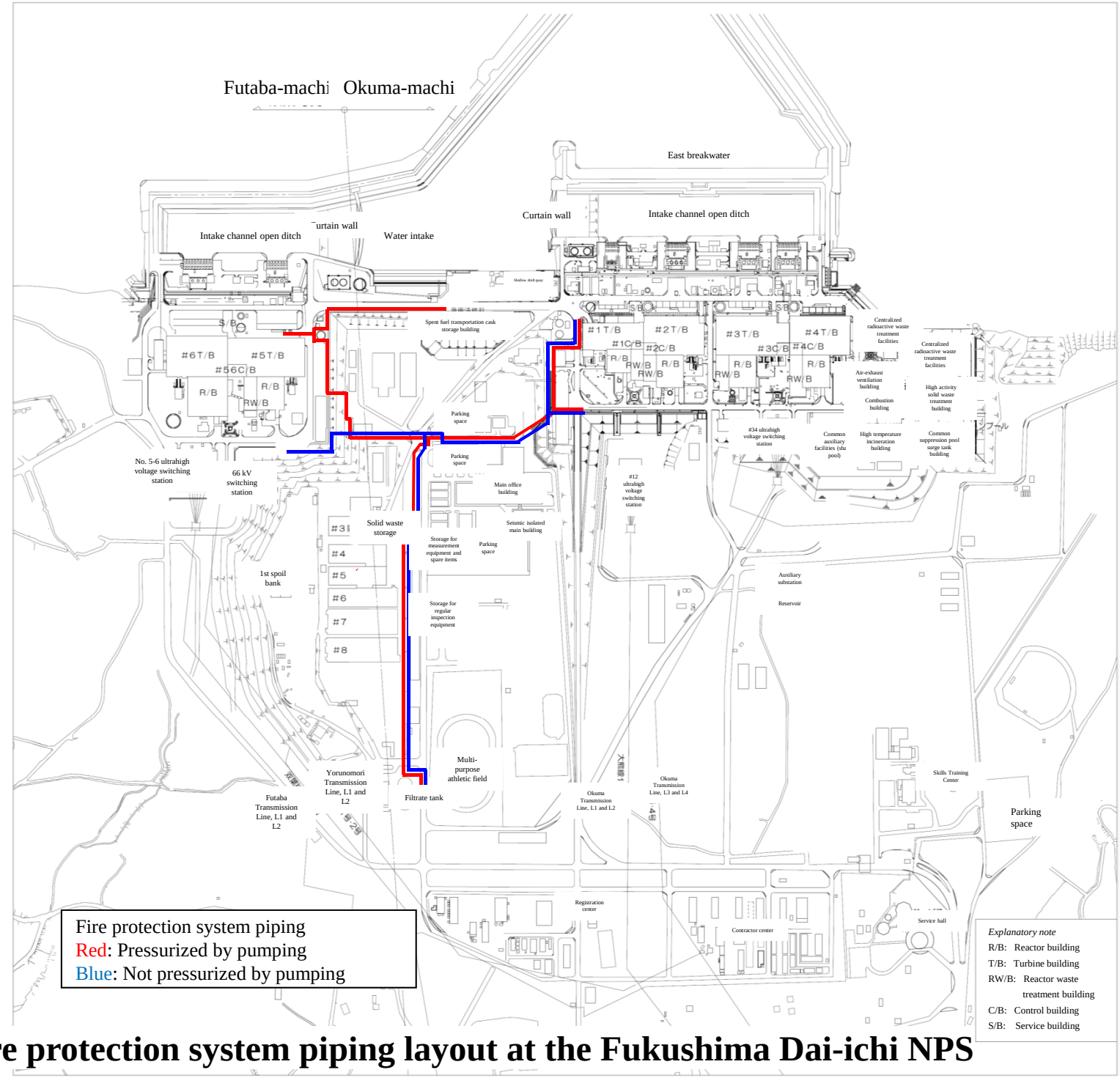


Landside on the slope (Viewpoint (i))

Collapse of the pylon (Viewpoint (ii))

- Top picture showing the landslide: Photographed by ©Geo Eye on March 19, 2011.
- Pictures from Viewpoints (i) and (ii): Photographed by Tokyo Electric Power Company on March 18, 2011.

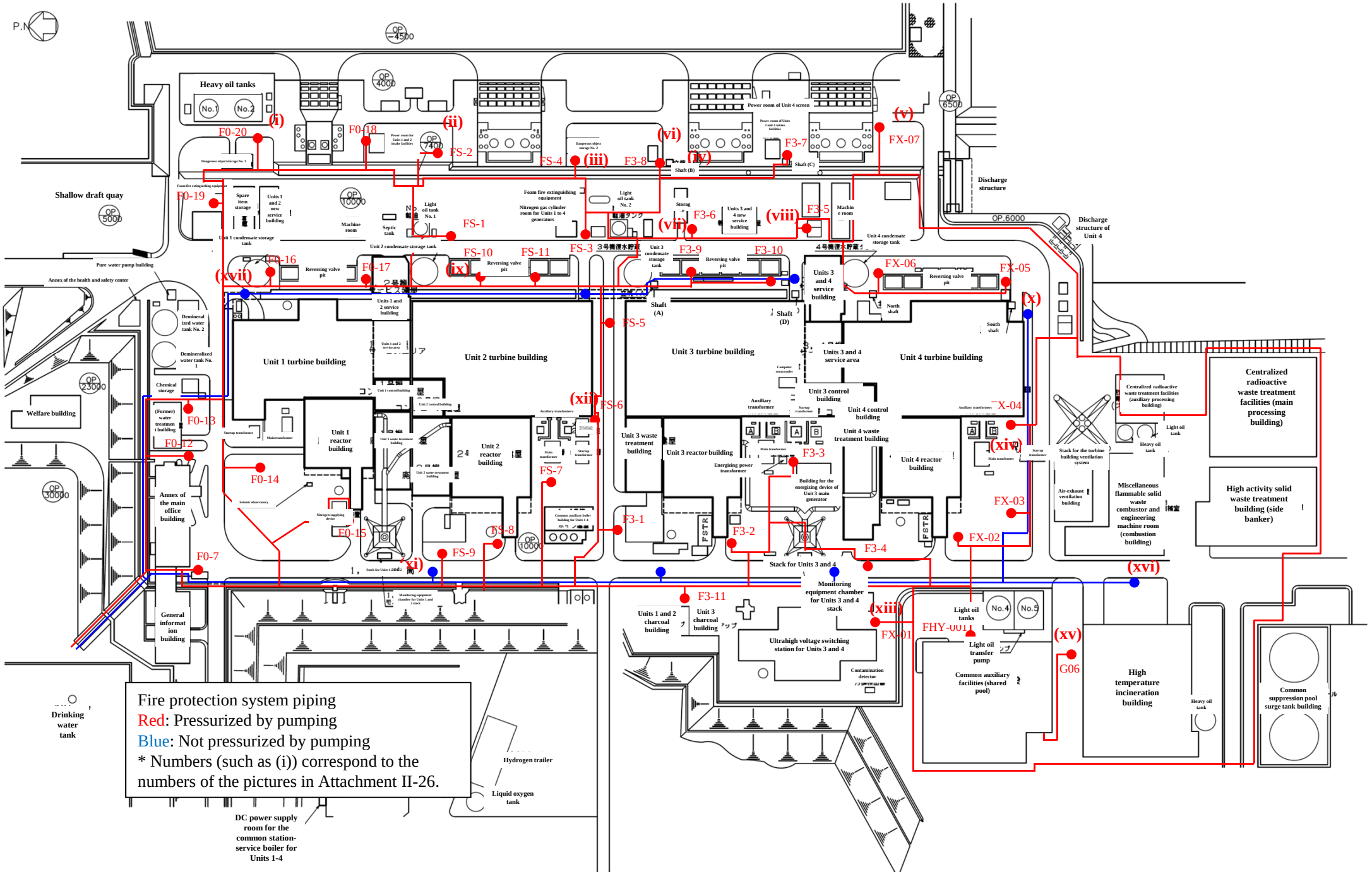
Picture (viii): Collapsed Pylon No. 27 of the Yorunomori Transmission Line, L1 and L2.



Fire protection system piping layout at the Fukushima Dai-ichi NPS

Based on data and documents by Tokyo Electric Power Company.

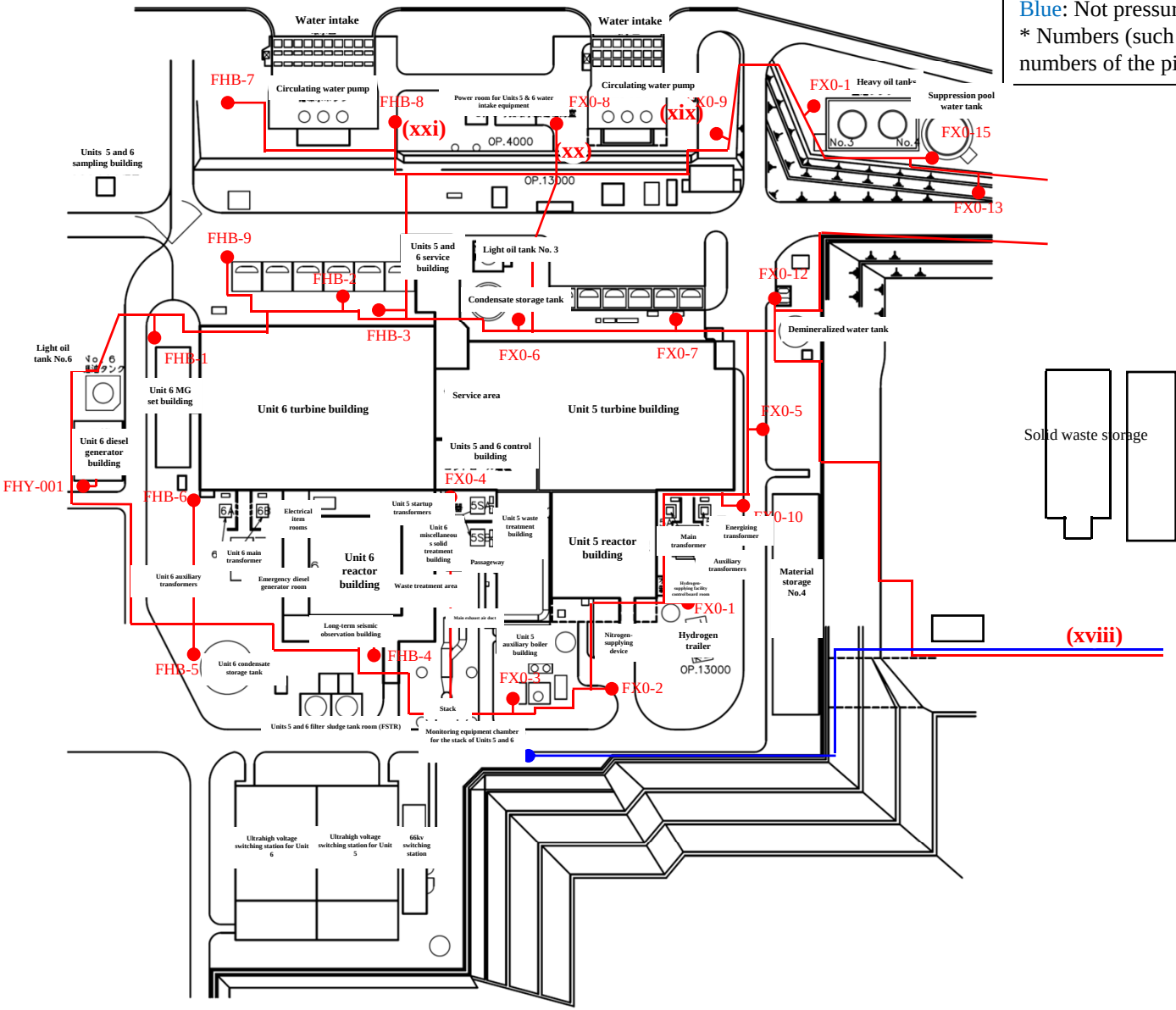
Attachment II-24



Fire protection system piping layout at the Fukushima Dai-ichi NPS (Units 1 to 4)

Based on data and documents by Tokyo

Fire protection system piping
Red: Pressurized by pumping
Blue: Not pressurized by pumping
* Numbers (such as (i)) correspond to the numbers of the pictures in Attachment II-26.



Based on data and documents by Tokyo Electric Power Company

Fire protection system piping layout at the Fukushima Dai-ichi NPS (Units 5 and 6)

Location of the T/B water delivery ports at Units 1 to 4 of the Fukushima Dai-ichi NPS

＊ Construction completed in June 2010.

Photographed by Tokyo Electric Power Company on August 1, 2011.

＊ Construction completed in June 2010.
Used for reactor coolant injection.

Photographed by Tokyo Electric Power Company on August 1, 2011.

＊ Construction completed in June 2010.
Used for reactor coolant injection.

Photographed by Tokyo Electric Power Company on July 29, 2011.

＊ Construction completed in June 2010.
Used for reactor coolant injection.

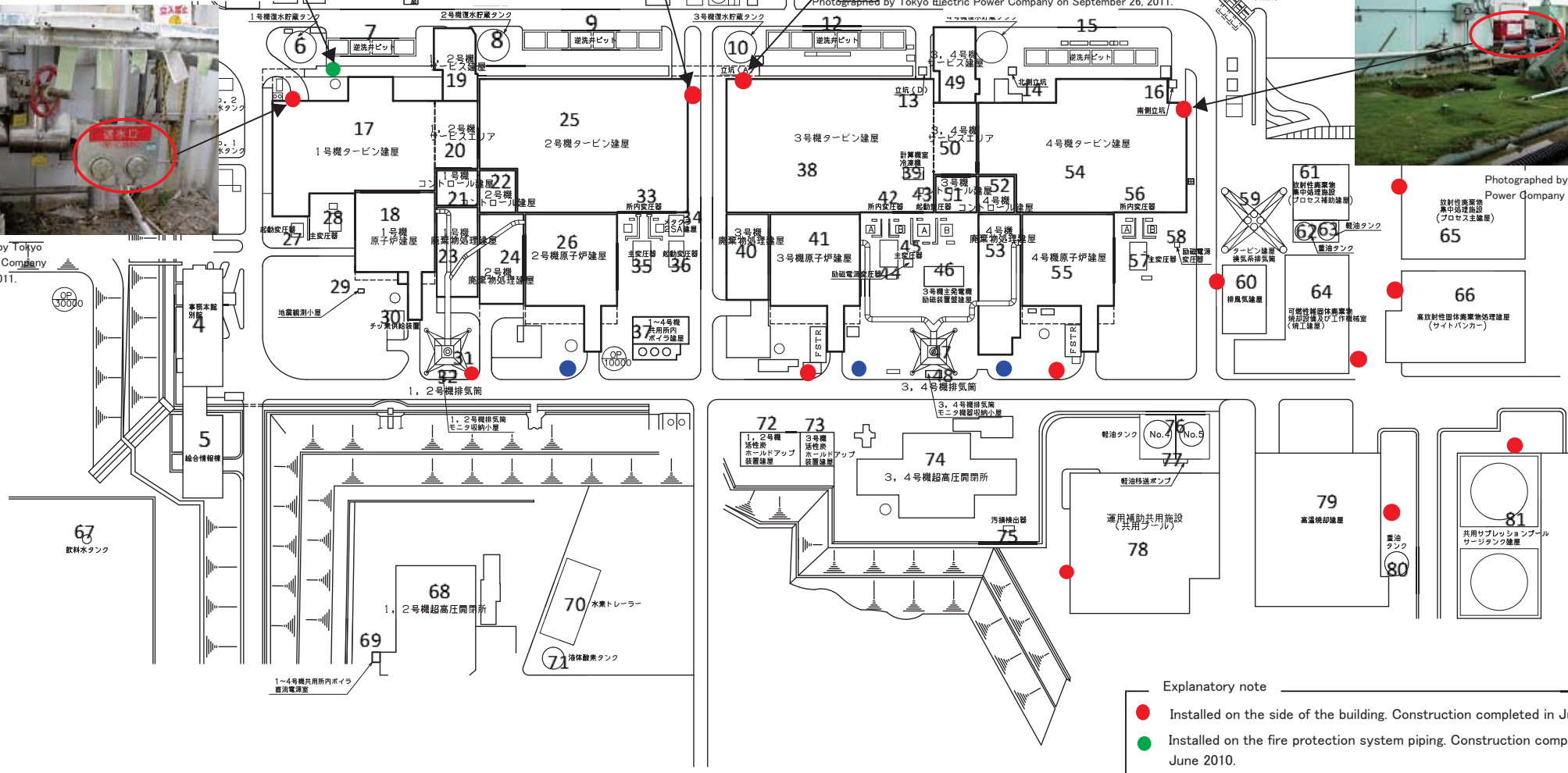
Photographed by Tokyo Electric Power Company on September 26, 2011.

＊ Construction completed in June 2010.

Photographed by Tokyo Electric Power Company on September 26, 2011.

Photograph taken from the depth of the photograph below facing toward the wall.

Photographed by Tokyo Electric Power Company on July 29, 2011.



Explanatory note

- Installed on the side of the building. Construction completed in June 2010.
- Installed on the fire protection system piping. Construction completed in June 2010.
- Installed on the fire protection system piping. (Renovated in June 2010.)

Based on data and documents by Tokyo Electric Power Company

Attachment II-25

福島第一原子力発電所１号機から４号機　Ｔ／Ｂ送水口設置個所：Location of the T/B water delivery ports at Units 1 to 4 of the Fukushima Dai-ichi NPS

図上部　左⇒右

①機械室：Machine room
②放水口：Discharge structure
③４号機放水口：Discharge structure of Unit 4

図中央部　左⇒右

④事務本館別館：Annex of the main office building
⑤総合情報棟：General information building
⑥１号機復水貯蔵タンク：Unit 1 condensate storage tank
⑦逆洗弁ピット：Reversing valve pit
⑧２号機復水貯蔵タンク：Unit 2 condensate storage tank
⑨逆洗弁ピット：Reversing valve pit
⑩３号機復水貯蔵タンク：Unit 3 condensate storage tank
⑪立杭（A）：Shaft (A)
⑫逆洗弁ピット：Reversing valve pit
⑬立杭（Ｄ）：Shaft (D)
⑭北側立杭：North shaft
⑮逆洗弁ピット：Reversing valve pit
⑯南側立杭：South shaft
⑰１号機タービン建屋：Unit 1 turbine building
⑱１号機原子炉建屋：Unit 1 reactor building
⑲１，２号機サービス建屋：Units 1 and 2 service building
⑳１，２号機サービスエリア：Units 1 and 2 service area
㉑１号機コントロール建屋：Unit 1 control building
㉒２号機コントロール建屋：Unit 2 control building
㉓１号機廃棄物処理建屋：Unit 1 waste treatment building
㉔２号機廃棄物処理建屋：Unit 2 waste treatment building
㉕２号機タービン建屋：Unit 2 turbine building
㉖２号機原子炉建屋：Unit 2 reactor building
㉗起動変圧器：Startup transformer
㉘主変圧器：Main transformer
㉙地震観測小屋：Seismic observatory

㉚チッ素供給装置：Nitrogen-supplying device
㉛１，２号機排気筒：Stack for Units 1 and 2
㉜１，２号機排気筒モニタ収納小屋：Monitoring equipment chamber for Units 1 and 2 stack
㉝所内変圧器：Auxiliary transformers
㉞メタクラ２SA 建屋：Metal clad switch gear 2SA building
㉟主変圧器：Main transformer
㊱起動変圧器：Startup transformer
㊲１～４号機共用所内ボイラ建屋：Common auxiliary boiler building for Units 1-4
㊳３号機タービン建屋：Unit 3 turbine building
㊴計算機室冷凍機：Computer room cooler
㊵３号機廃棄物処理建屋：Unit 3 waste treatment building
㊶３号機原子炉建屋：Unit 3 reactor building
㊷所内変圧器：Auxiliary transformers
㊸起動変圧器：Startup transformer
㊹励磁電源変圧器：Energizing power transformer
㊺主変圧器：Main transformer
㊻３号機主発電機励磁装置盤建屋：Building for the energizing device of Unit 3 main generator
㊼３，４号機排気筒：Stack for Units 3 and 4
㊽３，４号機排気筒モニタ収納小屋：Monitoring equipment chamber for Units 3 and 4 stack
㊾３，４号機サービス建屋：Units 3 and 4 service building
㊿３，４号機サービスエリア：Units 3 and 4 service area
(51)３号機コントロール建屋：Unit 3 control building
(52)４号機コントロール建屋：Unit 4 control building
(53)４号機廃棄物処理建屋：Unit 4 waste treatment building
(54)４号機タービン建屋：Unit 4 turbine building
(55)４号機原子炉建屋：Unit 4 reactor building
(56)所内変圧器：Auxiliary transformer
(57)主変圧器：Main transformer
(58)励磁電源変圧器：Energizing power transformer
(59)タービン建屋換気系排気筒：Stack for the turbine building ventilation system
(60)排風気建屋：Air-exhaust ventilation building
(61)放射性廃棄物集中処理施設(プロセス補助建屋)：Centralized radioactive waste treatment facilities (auxiliary processing building)
(62)重油タンク：Heavy oil tank
(63)軽油タンク：Light oil tank

㊹可燃性雑固体廃棄物焼却施設および工作機械室（焼工建屋）：Miscellaneous flammable solid waste combustor and engineering machine room (combustion building)
㊺放射性廃棄物集中処理施設（プロセス主建屋）：Centralized radioactive waste treatment facilities (main processing building)
㊻高放射性固体廃棄物処理建屋（サイトバンカー）：High activity solid waste treatment building (side banker)

図下部　左⇒右

㊼飲料水タンク：Drinking water tank
㊽１，２号機超高圧開閉所：Ultrahigh voltage switching station for Units 1 and 2
㊾１～４号機共用所内ボイラ直流電源室：DC power supply room for the common station-service boiler for Units 1-4
㊿水素トレーラー：Hydrogen trailer
(71)液体酸素タンク：Liquid oxygen tank
(72)１、２号機活性炭ホールドアップ装置建屋：Units 1 and 2 charcoal building
(73)３号機活性炭ホールドアップ装置建屋：Unit 3 charcoal building
(74)３，４号機超高圧開閉所：Ultrahigh voltage switching station for Units 3 and 4
(75)汚損検出器：Contamination detector
(76)軽油タンク：Light oil tanks
(77)軽油移送ポンプ：Light oil transfer pump
(78)運用補助共用施設（共用プール）：Common auxiliary facilities (shared pool)
(79)高温焼却建屋：High temperature incineration building
(80)重油タンク：Heavy oil tank
(81)共用サプレッションプールサージタンク建屋：Common suppression pool surge tank building

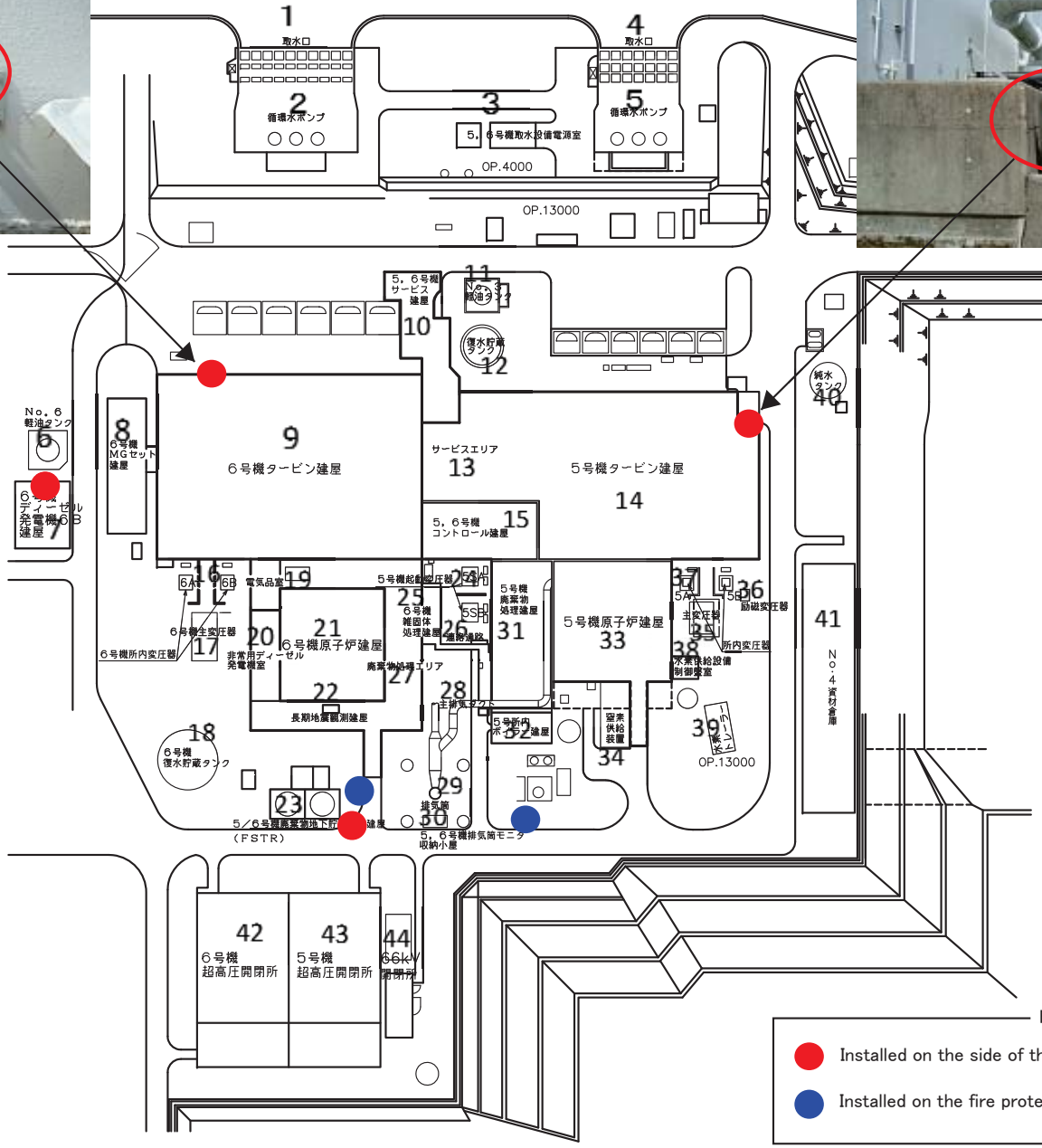
Location of the T/B water delivery ports at Units 5 and 6 of the Fukushima Dai-ichi NPS

＊ Construction completed in June 2010.

Photographed by Tokyo Electric Power Company on September 26, 2011.

＊ Construction completed in June 2010.

Photographed by Tokyo Electric Power Company on September 26, 2011.



Explanatory note

- Installed on the side of the building. Construction completed in June 2010.
- Installed on the fire protection system piping. (Renovated in June 2010.)

Based on data and documents by Tokyo Electric Power Company

福島第一原子力発電所５号機及び６号機　Ｔ／Ｂ送水口設置個所：Location of the T/B water delivery ports at Units 5 and 6 of the Fukushima Dai-ichi NPS

Location of the T/B water delivery ports at Units 1 to 4 of the Fukushima Dai-ichi NPS

図上部　左⇒右）

①取水口：Water intake
②循環水ポンプ：Circulating water pump
③５，６号機取水設備電源室：Power room for Units 5 and 6 intake facilities
④取水口：Water intake
⑤循環水ポンプ：Circulating water pump

図中央部　左⇒右

⑥Ｎｏ．６軽油タンク：Light oil tank No. 6
⑦６号機ディーゼル発電機建屋：Unit 6 diesel generator building
⑧６号機ＭＧセット建屋：Unit 6 MG set building
⑨６号機タービン建屋：Unit 6 turbine building
⑩５，６号機サービス建屋　：Units 5 and 6 service building
⑪Ｎｏ．３軽油タンク：Light oil tank No. 3
⑫復水貯蔵タンク：Condensate storage tank
⑬サービスエリア：Service area
⑭５号機タービン建屋：　Unit 5 turbine building
⑮５，６号機コントロール建屋：Units 5 and 6 control building
⑯６号機所内変圧器：Unit 6 auxiliary transformers
⑰６号機主変圧器：Unit 6 main transformer
⑱６号機復水貯蔵タンク：Unit 6 condensate storage tank
⑲電気品室：Electrical item room
⑳非常用ディーゼル発電機室：Emergency diesel generator room
㉑６号機原子炉建屋：Unit 6 reactor building
㉒長期地震観測建屋：Long-term seismic observation building
㉓５／６号機廃棄物地下貯蔵設備建屋：Units 5 and 6 filter sludge tank room
㉔５号機起動変圧器：Unit 5 startup transformers
㉕６号機雑固体処理建屋：Unit 6 miscellaneous solid treatment building
㉖連絡通路：Passageway
㉗廃棄物処理エリア：Waste treatment area
㉘主排気ダクト：Main exhaust air duct

㉙排気筒：Stack

㉚５，６号機排気筒モニタ収納小屋：Monitoring equipment chamber for the stack of Units 5 and 6

㉛５号機廃棄物処理建屋：Unit 5 waste treatment building

㉜５号所内ボイラー建屋：Unit 5 auxiliary boiler building

㉝５号機原子炉建屋：Unit 5 reactor building

㉞窒素供給装置：Nitrogen-supplying device

㉟主変圧器：Main transformer

㊱励磁変圧器：Energizing transformer

㊲所内変圧器：Auxiliary transformers

㊳水素供給設備制御盤室：Hydrogen-supplying facility control board room

㊴水素トレーラー：Hydrogen trailer

㊵純水タンク：Demineralized water tank

㊶Ｎｏ．４資材倉庫：Material storage No.4

図下部　左⇒右

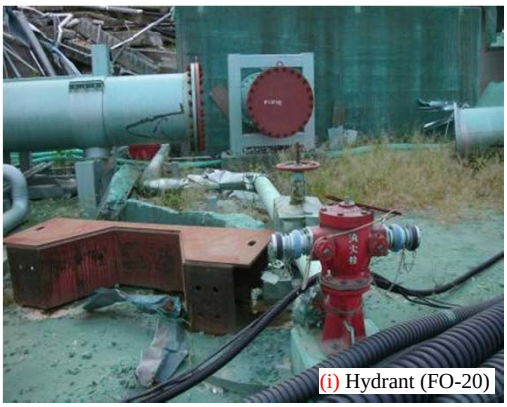
㊷６号機超高圧開閉所：Ultrahigh voltage switching station for Unit 6

㊸５号機超高圧開閉所：Ultrahigh voltage switching station for Unit 5

㊹６６ＫＶ開閉所：66 kV switchyard

Attachment II-26

Photographs showing the installation of outdoor fire protection system facilities at the Fukushima Dai-ichi NPS



(i) Hydrant (FO-20)

August 24, 2011 Photographed by Tokyo Electric Power Company

(ii) Hydrant (FS-2)

August 24, 2011 Photographed by Tokyo Electric Power Company

(iii) Hydrant (FS-4)

August 24, 2011 Photographed by Tokyo Electric Power Company

(iv) Intake of the domestic water system

August 24, 2011 Photographed by Tokyo Electric Power Company

(v) Hydrant (FX-07)

August 24, 2011 Photographed by Tokyo Electric Power Company

(vi) Hydrant (F3-8)

August 24, 2011 Photographed by Tokyo Electric Power Company

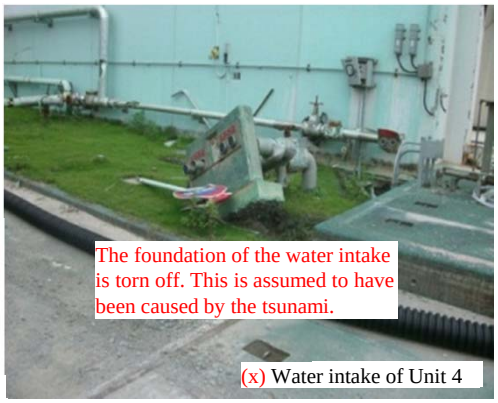
* Of the entire outdoor fire extinguishing system, the pictures above show only examples of damage to facilities installed above ground.
(The condition of underground piping is yet to be confirmed.)

Photographs showing the installation of outdoor fire protection system facilities at the Fukushima Dai-ichi NPS

August 24, 2011 Photographed by Tokyo Electric Power Company

August 24, 2011 Photographed by Tokyo Electric Power Company

August 24, 2011 Photographed by Tokyo Electric Power Company



August 24, 2011 Photographed by Tokyo Electric Power Company

August 25, 2011 Photographed by Tokyo Electric Power Company

August 25, 2011 Photographed by Tokyo Electric Power Company

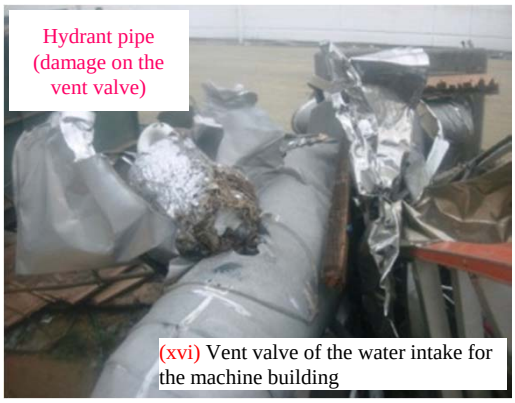
* Of the entire outdoor fire extinguishing system, the pictures above show only examples of damage to facilities installed above ground.
(The condition of underground piping is yet to be confirmed.)

Photographs showing the installation of outdoor fire protection system facilities at the Fukushima Dai-ichi NPS

August 25, 2011 Photographed by Tokyo Electric Power Company

August 25, 2011 Photographed by Tokyo Electric Power Company

August 25, 2011 Photographed by Tokyo Electric Power Company



March 24, 2011 Photographed by Tokyo Electric Power Company

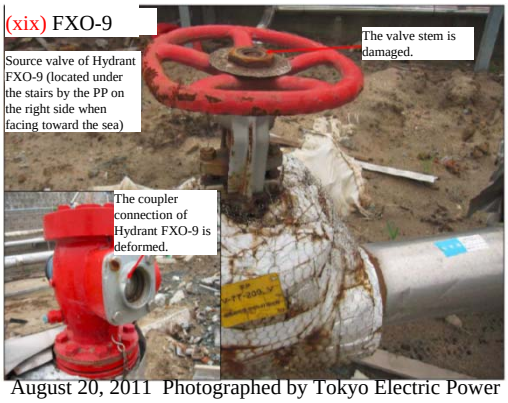
July 4, 2011 Photographed by Tokyo Electric Power Company

August 15, 2011 Photographed by Tokyo Electric Power Company

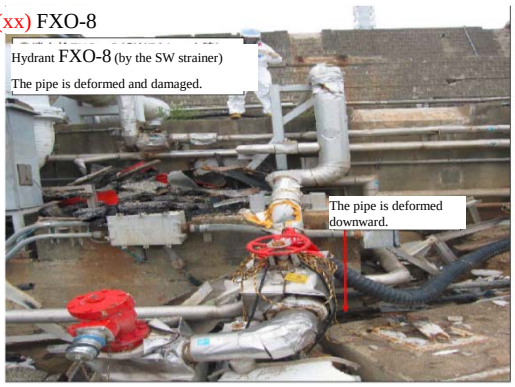
* Of the entire outdoor fire extinguishing system, the pictures above show only examples of damage to facilities installed above ground.
(The condition of underground piping is yet to be confirmed.)

Photographs showing the installation of outdoor fire protection system facilities at the Fukushima Dai-ichi NPS

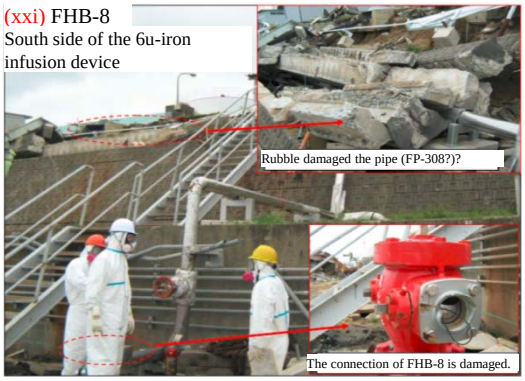
August 15, 2011 Photographed by Tokyo Electric Power Company



August 20, 2011 Photographed by Tokyo Electric Power Company



August 20, 2011 Photographed by Tokyo Electric Power Company



March 20, 2011 Photographed by Tokyo Electric Power Company

* Of the entire outdoor fire extinguishing system, the pictures above show only examples of damage to facilities installed above ground.
(The condition of underground piping is yet to be confirmed.)

Attachment II-27

Photographs showing the installation of fire hydrants in the T/Bs of Units 1 to 3

Unit 1 turbine building

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (HB-9) on the first floor

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (HB-11) on the first floor

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (HB-18) on the second floor

Photographs showing the installation of fire hydrants in the T/Bs of Units 1 to 3

Unit 2 turbine building

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (FH-17) on the second floor

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (FH-18) on the second floor

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (FH-20) on the second floor

Photographs showing the installation of fire hydrants in the T/Bs of Units 1 to 3

Unit 3 turbine building

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (T-14) on the first floor

August 25, 2011 Photographed by Tokyo Electric Power Company

Hydrant (T-19) on the second floor

Attachment II-28

Photographs showing damage to the main office building

March 29, 2011 Photographed by Tokyo Electric Power Company

Picture (i): Inside the office of the Public Relations Department on the first floor.

March 29, 2011 Photographed by Tokyo Electric Power Company

Picture (ii): Hallway near the entrance on the first floor.

Photographs showing damage to the main office building

May 6, 2011 Photographed by Tokyo Electric Power Company

Picture (iii): Inside the office of the General Affairs Department on the second floor.

March 29, 2011 Photographed by Tokyo Electric Power Company

Picture (iv): Inside the office of the General Engineering Department on the second floor.

Photographs showing damage to the main office building

May 6, 2011 Photographed by Tokyo Electric Power Company

Picture (v): Exterior of the main building.

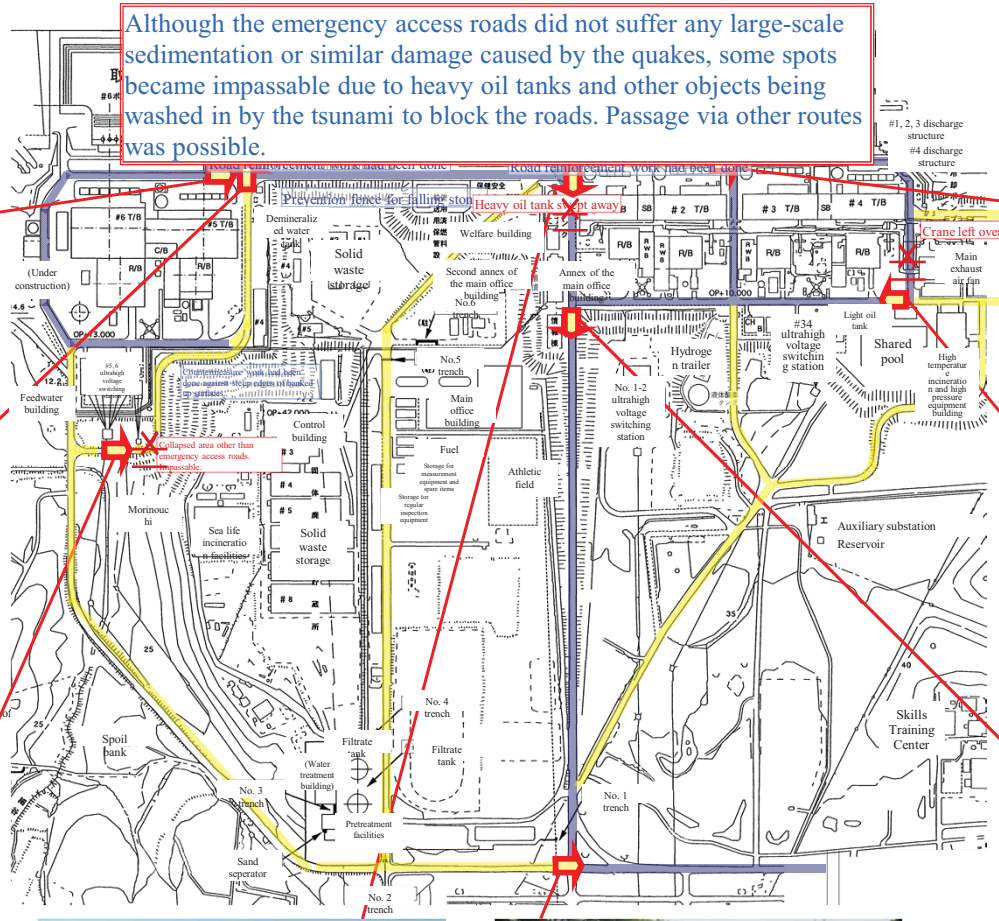
Photographs showing damage to emergency access roads to the Fukushima Daiichi NPS

Although the emergency access roads did not suffer any large-scale sedimentation or similar damage caused by the quakes, some spots became impassable due to heavy oil tanks and other objects being washed in by the tsunami to block the roads. Passage via other routes was possible.

The lane on the sea side cracked parallel to the road and created a gap. The west side was passable. Photographed by TEPCO on March 17, 2

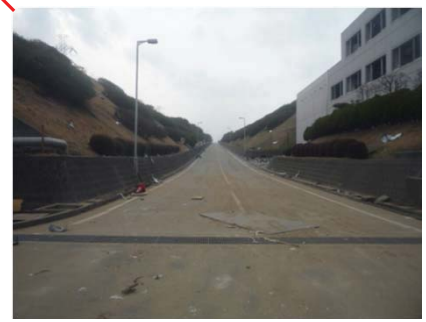
Although this area had had reinforcement work, cracks and gaps occurred on the sides of road which had not been reinforced. Photographed by TEPCO on March 17, 2011

Although this is not an emergency access road, the slopes collapsed and blocked the road, leaving it impassable. Photographed by TEPCO on March 20, 2011



Although no particular problem was observed with the road, rubble scattered around due to the tsunami and explosion Photographed by TEPCO on March 16, 2011

No particular problem was observed on the west sides of Units 1 to 4. When Units 1, 3 and 4 were damaged, rubble scattered around. Photographed by TEPCO on Match 20, 2011



Despite the scattering of some rubble, no particular problem was observed on the road. Photographed by TEPCO on March 20, 2011

Although there was no major damage to the road, a heavy oil tank washed in by the tsunami t road, leaving it impassable. Photographed by TEPCO on March 17, 2011

No particular problem was observed on the straight road stretching from the main gate. Photographed by TEPCO on August 26, 2011

Emergency access road

Major route other than emergency access roads

Impassable

Photograph spot & direction

Based on data and documents by Tokyo Electric Power

Attachment II-29