

No.(2)-6

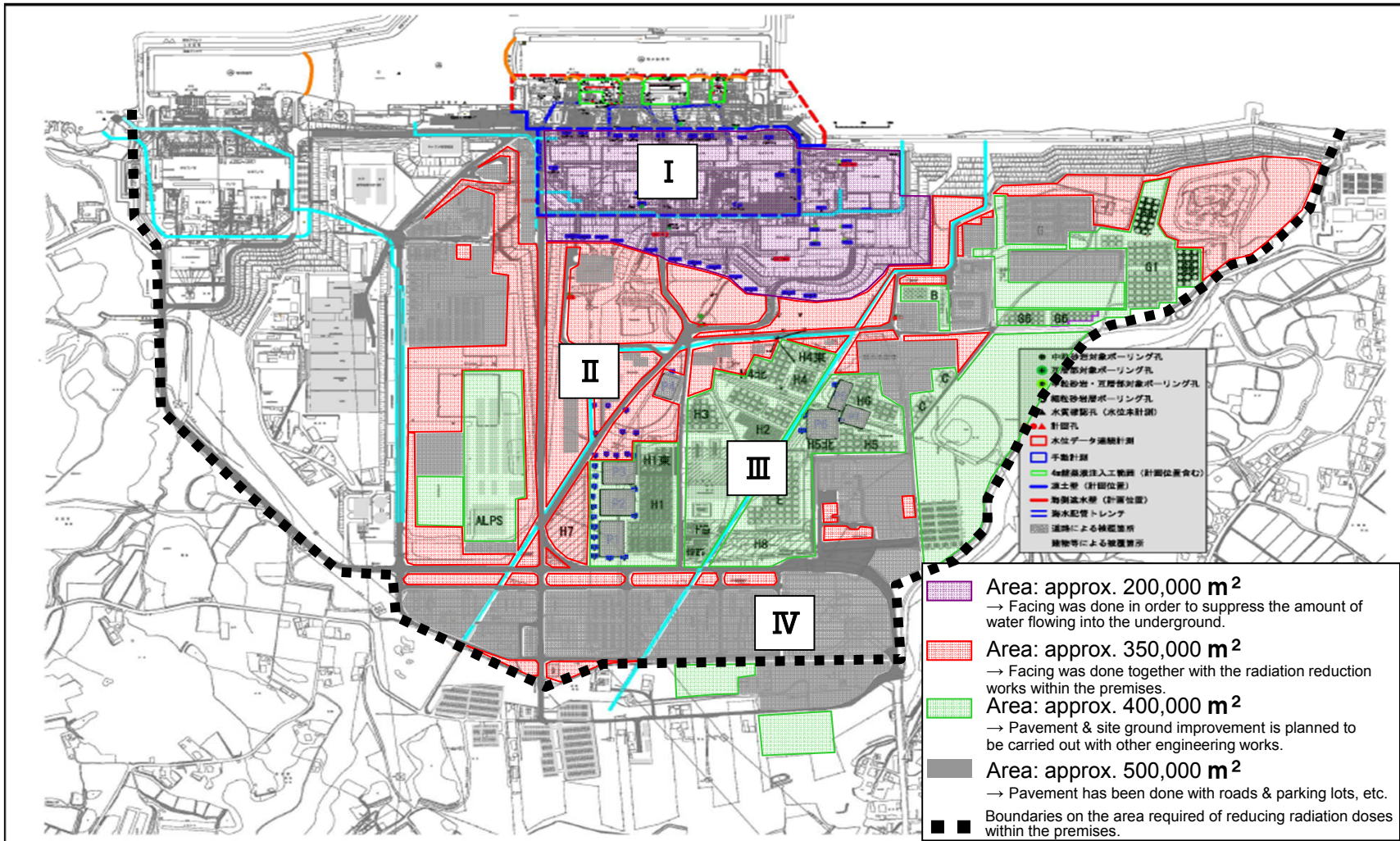
# Outline of the Facing Works within the Premises of the Fukushima Daiichi NPS

July 14, 2014

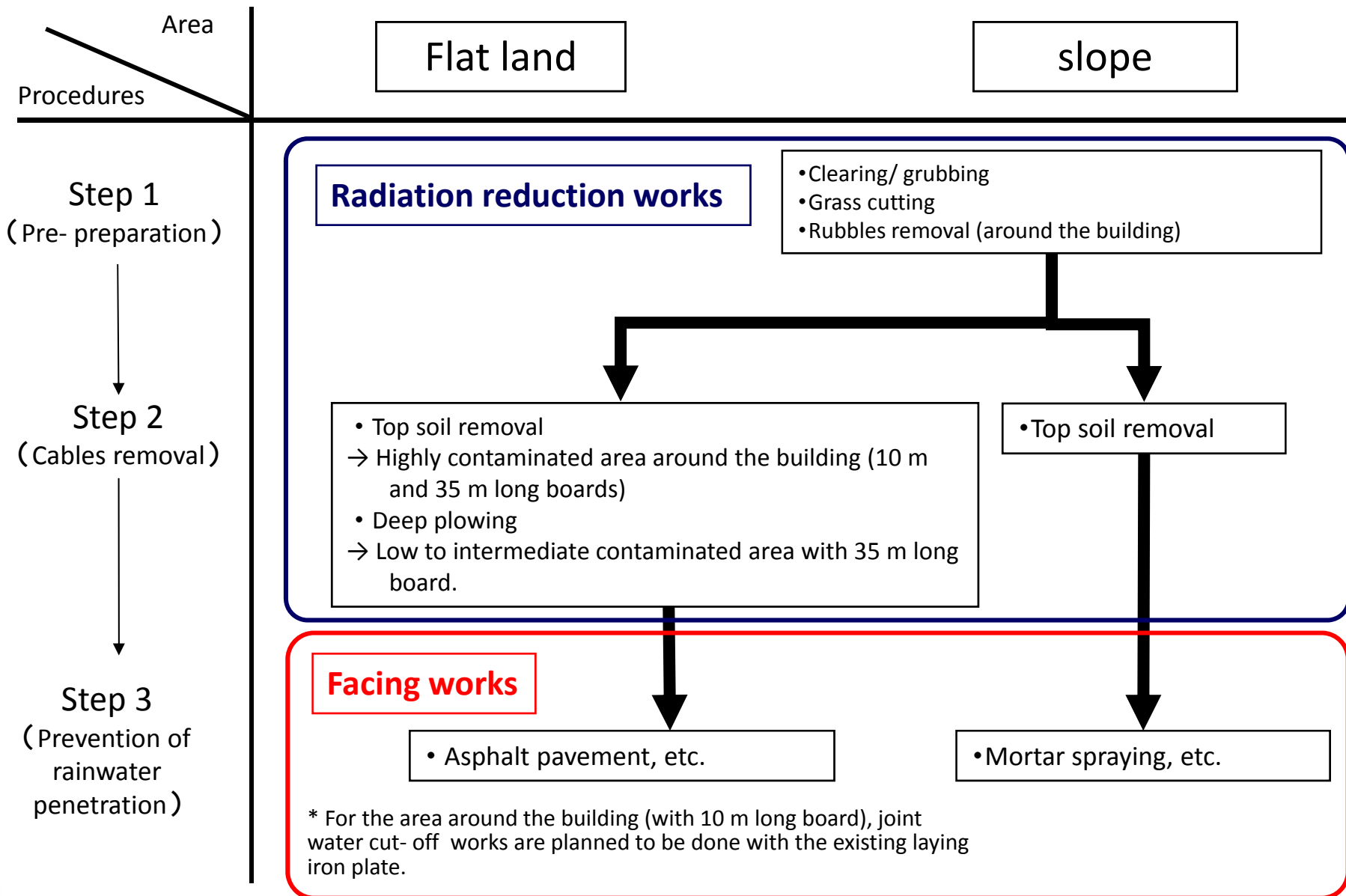
Tokyo Electric Power Company

# 1. Purpose for facing and area to be coated

- The purpose is to reduce the amount of water flowing into the building in such a manner as to cover the ground surface with asphalt to reduce radiation dose and suppress rainwater from seeping into underground.



## 2. Facing process



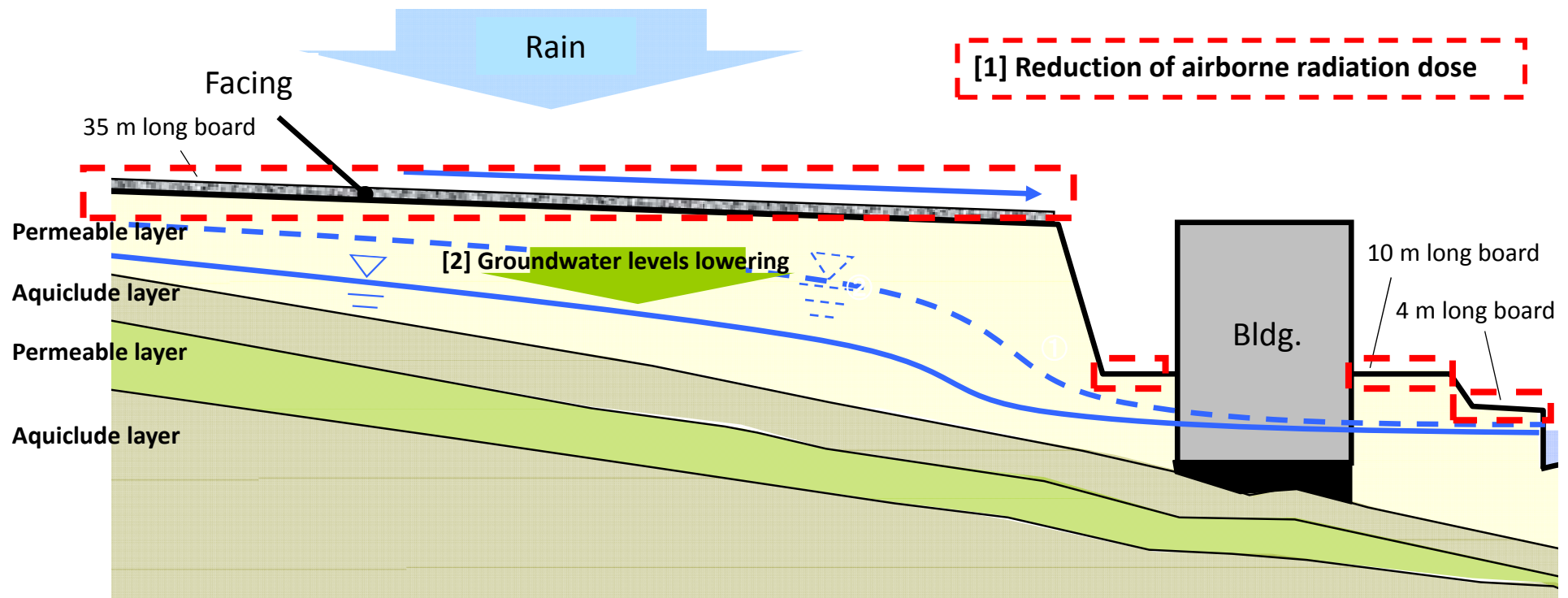
### 3. Image of facing

Effects expected to gain through the facing.

[1] Reduction of radiation dose within the premises.

[2] Reduction of the amount of water flowing into the building due to groundwater levels lowering.

【Overview of measures】



# Effects expected through facing

---

## [1] Reduction of radiation dose within the premises

### 【Works and effects】

- Clearing/ Top soil removal
  - Remove the source of high density contamination attached to trees and soils because of fall out.
- Deep plowing (incl. premises clearing)
  - For the source of low to intermediate contamination, shield the source with embankment after plowing (replacement of top soils and deeper soils) is done.
- Facing
  - Reduce radiation dose by using such as shielding subbase course materials + asphalt.






Contamination works are to be carried out before moving to facing works in accordance with the implementation guidelines for radiation dose reduction in the premises.

For implementing the works, survey is conducted for each area to obtain radiation dose rate and grasp the construction environment, and in light of which, specific construction methods will be decided and carried out.

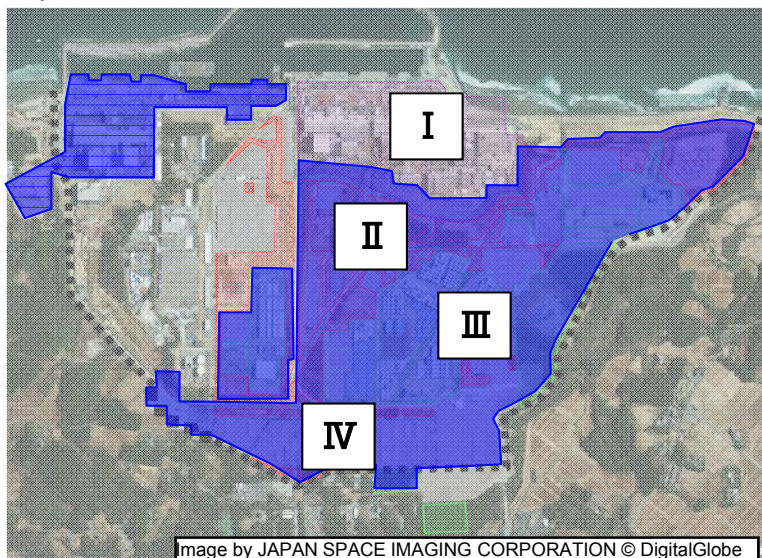
## 4.2 Expansion of radiation dose reduction areas

\* Areas with 5  $\mu$ Sv/h are highlighted in .

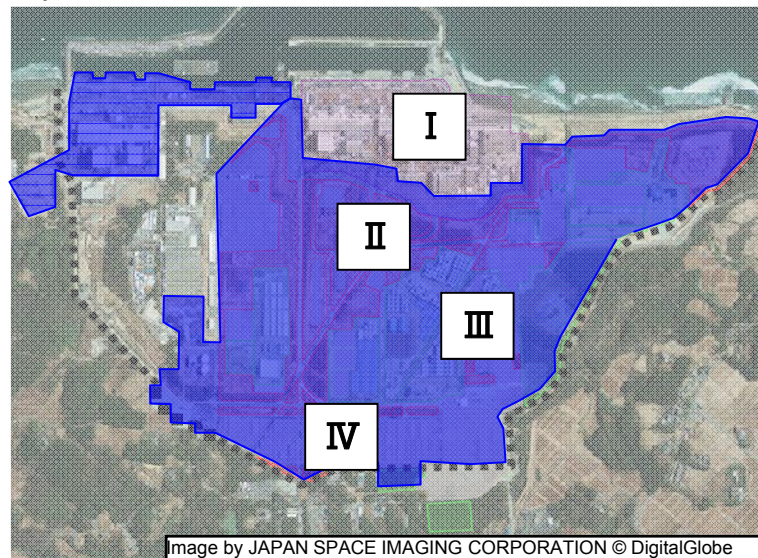
Around Units 1 to 4 (Area I), the removal of rubbles to impair the works and the reduction of radiation dose by shielding the work areas are underway, but since there are still some plants and equipment indicating high radiation dose, the radiation dose reduction will proceed in line with the processes of removing high-radiation equipment and rubbles from reactor buildings.

-  Area I Especially high radiation dose rate around Units 1 to 4.
-  Area II Area where planted trees and woods remain.
-  Area III Area with equipment installed or to be installed.
-  Area IV Area already pavement is done such as roads and parking lots.
-  Enclosed is the area subject to the implementation guidelines for radiation dose reduction within the premises.

By the end of 2014 (forecast)









By the end of 2015 (forecast)



# 4-3 Progress status of radiation reduction within the premises

\* Area with 5 $\mu$ Sv/h or around is highlighted with 

-  Area I Especially high radiation dose rate around Units 1 to 4.
-  Area II Area where planted trees and woods remain.
-  Area III Area with equipment installed or to be installed.
-  Area IV Area already pavement is done such as roads and parking lots.
-  Enclosed is the area subject to the implementation guidelines for radiation dose reduction within the premises.
-  Area with 5 $\mu$ Sv/h or around.

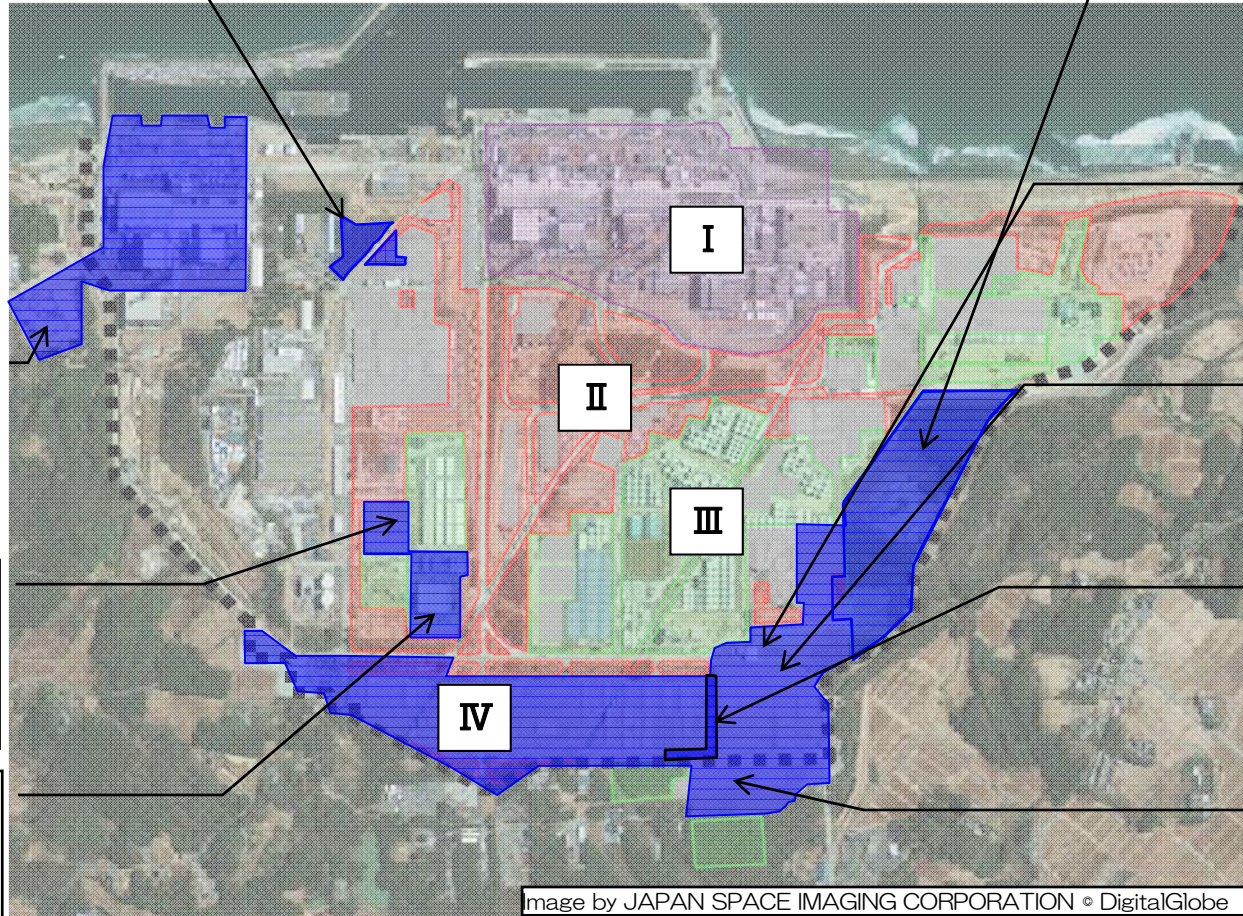
Shiomi-zaka slope  
300 $\mu$ Sv/h $\Rightarrow$   
41 $\mu$ Sv/h  
(Ground surface)3.0 $\mu$ Sv/h  
(Confirmed in Feb, 2014)

\* Since the area is affected directly by radiation dose or by surrounding grounds left unlevelled, measures to reduce further radiation dose such as removing surface soil of the slope will be studied.

Solid Waste Incinerator Bldg.  
20 $\mu$ Sv/h $\Rightarrow$   
3.6 $\mu$ Sv/h  
(Confirmed in May, 2013)

Temporary cask storage facilities  
10~20 $\mu$ Sv/h $\Rightarrow$  5.1 $\mu$ Sv/h  
(Confirmed in Jan, 2013)

ALPS  
10~20 $\mu$ Sv/h $\Rightarrow$   
3.4 $\mu$ Sv/h  
(Confirmed in Jan, 2013)



J Tank installed area  
100 $\mu$ Sv/h $\Rightarrow$   
3.7 $\mu$ Sv/h  
(Confirmed in June, 2014)

Main gate  
14 $\mu$ Sv./h $\Rightarrow$   
3.8 $\mu$ Sv/h  
(Confirmed in Apr. 2013)

Entrance control bldg.  
34 $\mu$ Sv/h $\Rightarrow$   
2.1 $\mu$ Sv/h  
(Confirmed in June, 2013)

Southside of Company bldg.  
15 $\mu$ Sv/h $\Rightarrow$   
5.1 $\mu$ Sv/h  
(Confirmed in Mar., 2014)

Parking lot outside the premises  
13 $\mu$ Sv/h $\Rightarrow$   
2.2 $\mu$ Sv/h  
(Confirmed in June, 2013)

image by JAPAN SPACE IMAGING CORPORATION © DigitalGlobe

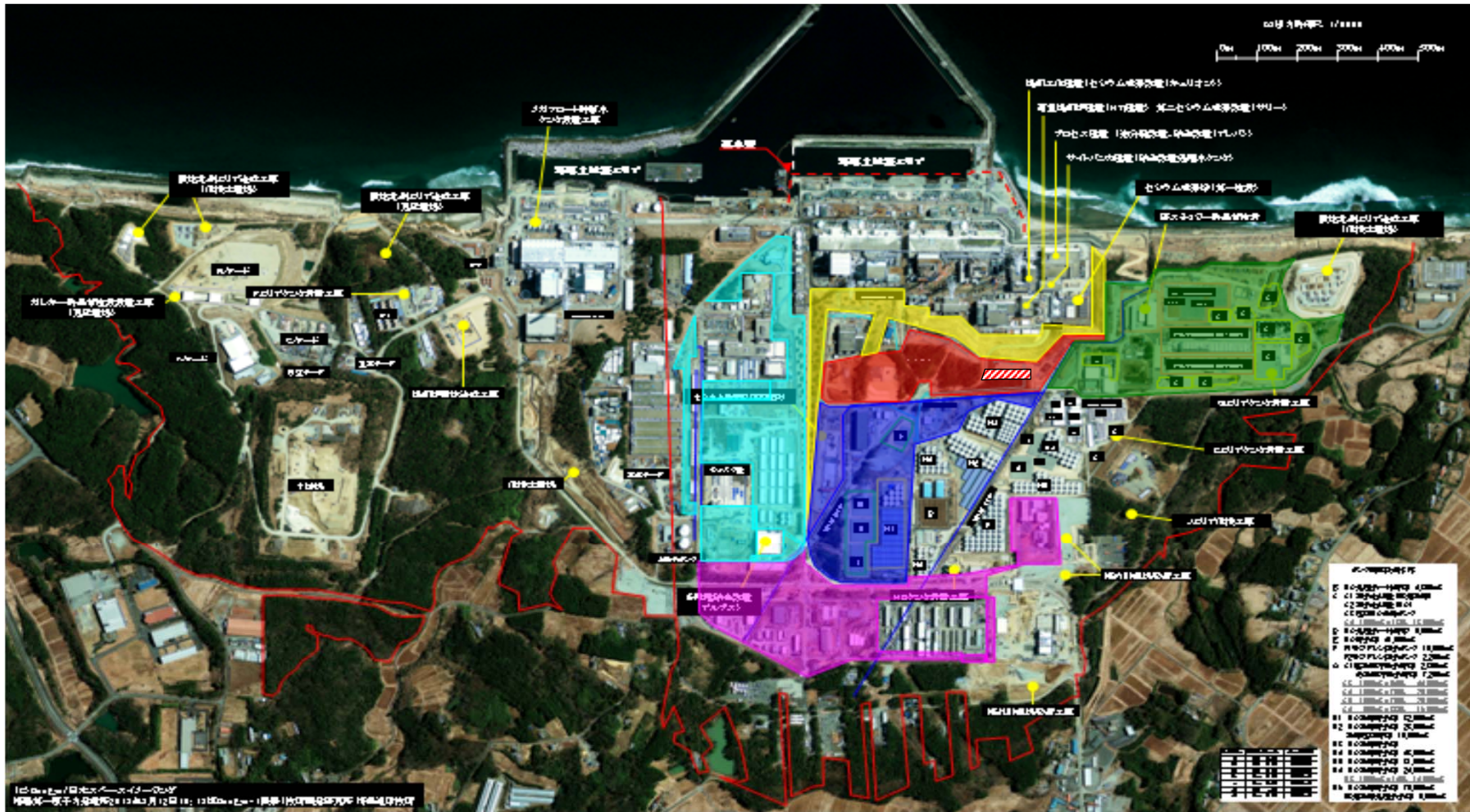
## 5. Progress status of radiation dose reduction within the premises, as of July 2014.

- For facing works, the construction works have started since Feb. 2014 and proceeded in order as planned taking into consideration the radiation dose rate in the construction area and the intervention with other construction works.
- The construction is scheduled to be completed in December 2015.

Facing works		FY2013			FY2014		FY2015	
		Jan	Feb	Mar	1st	2nd	1st	2nd
I	[1] Facing with O.P.+4m	Bet. water intakes of Units 1 to 4			▽ Completion in May, 2015 (plan)			
	[2] Facing with O.P.+10m	Reclamation / ground side of existing revetments (except for buildings)			▽ Completion target			
		Removal of damaged cars around Units 1 to 4			Removal of rubbles and damaged cars on seaside ▽ Completion			
					Joint water cut-off works with iron plate top soil removal/ Deep plowing/ facing		Completion target, Dec.2015 ▽	
II	[3] Facing with O.P.+35m	▽ Start up of works. Clearing/ top soil removal/ deep plowing/ facing.			▽ Completion target, Feb 2015			
	• Groundwater bypass area				Top soil removal Completion target, Mar 2015 ▽		▽ Completion target, Jul. 2015	
IV	• Slope area on the mount. side of Units 1 to 4						▽ Completion target, Mar. 2015	
	• G tank area						▽ Completion target, Mar. 2015	
	• H tank area				Top soil removal Completion target, Mar 2015 ▽		Completion target, Dec. 2015 ▽	
	• West side area: around Company bldg.				Top soil removal Completion target, May 2015 ▽		Completion target, Dec. 2015 ▽	
	• North side area: around Anti-earthquake bldg.							



# 6. Facing with 35 m long board implementation area

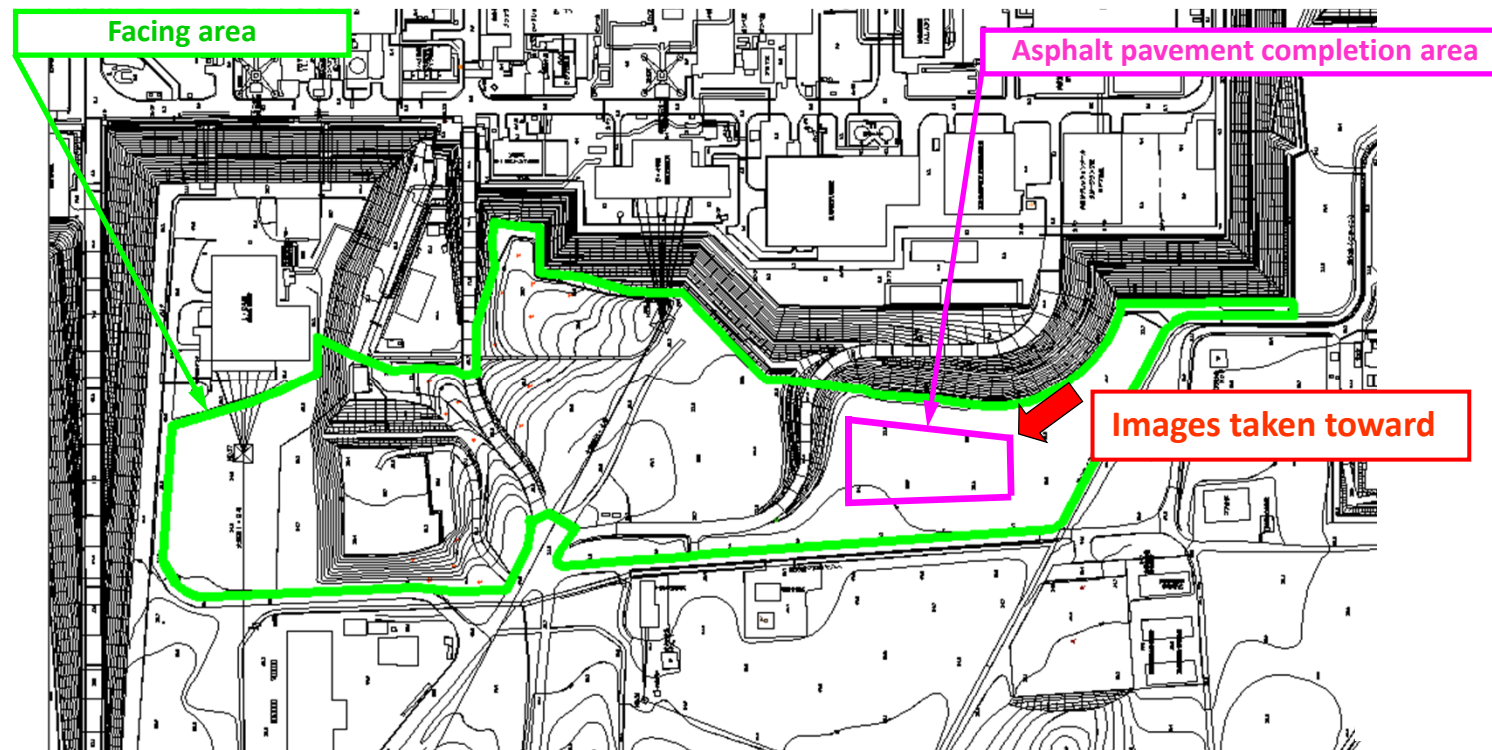


Color	Location	Color	Location
	Groundwater bypass area		H tank area
	Slope area of mount side of Units 1 to 4		West side area
	G tank area		North side area

**Legends**

- Area under construction (Ground water bypass area)
- Facing works done

## 7. Facing works implementation status (Groundwater bypass area)



After clearing works completion ( partial)



Image shooting date: March 17

After asphalt pavement works completion (partial)



Image shooting date: July 7