Control rods

driving system

Full

Chart 1. Outline of the Position Induction Probe

reactor pressure vessel

Full

insertion

of control

## Results of confirming the status of Position Induction Probe of Fukushima Daiichi Nuclear Power Station Unit 1

- <Objective>To judge the possibility of presuming the status of the bottom part of the reactor pressure vessel (hereinafter "RPV") by checking the condition at the contact points of Position Induction Probe (hereinafter "PIP") and estimating the soundness of the part between PIP and the cable.
- <Contents> To confirm that the full insertion position switch is on and the full withdrawal position switch is off.
- September 12, 2011 September 24, 2011 <Term>

vessel

< Results > Regarding the 97 control rods, the results of confirming the operation of the four contact points of PIP are as follows.

> There is a possibility that the cable is damaged and short-circuit or disconnected within the area where the PIP detection cable penetrates the primary containment vessel or the cables are assembled. According to the results of this survey, it is difficult to presume the status of the bottom part of RPV.

> > vessel

oo insertion Two contact points full rods insertion point of control Chart 2. Results of confirming the operation of the Position Induction Probe rods Control Through-hole of primary rods Through-hole of primary · O° containment vessel PIP containment vessel PIP position detection cable detection cable Middle of detection [Color coding] control switch rods : Conduction at two contact points at full inserted position Permanent : Conduction at four contact points Magnet : Conduction at one to three contact points Full : No conduction at four contact points withdrawal of control [Frame coding] 90° rods \* White line: Core quadrant sectional line **Position** Induction Conduction at all points except one **Probe** point ⇒ Short circuit event of detection line Mixture of disconnections and Connecter conductions at the contact points (leads to control rods Reactor **Primary** position instruction pressure containment system)