

Results of Survey of Omission of Construction-related Procedures Required by the High Pressure Gas Safety Law at Hamaoka Nuclear Power Station and Measures to Prevent Reoccurrence (Outline)

Following instructions received from Shizuoka Prefecture, Chubu Electric has conducted a survey of instances of omission of construction procedures (application for permission, submission of notification) required by the High Pressure Gas Safety Law, and has examined measures to enable improvement, as described below.

◆ Instructions from Shizuoka Prefecture (Excerpt from instructions concerning Hamaoka Nuclear Power Station)

Please report on the items described below in relation to the status of observance of permission and notification procedures, etc. required by the High Pressure Gas Safety Law concerning high-pressure gas facilities located in the Hamaoka Nuclear Power Station. (Deadline for submission: January 7, 2011)

- (1) Status of permission and notification when each facility was installed and when each facility has been modified
- (2) In the event that any facilities were installed or have been modified without application for permission or notification, the following items:
 - i) An overview of the facilities which were installed or modified without application for permission or notification, and a statement of the purpose of the facilities
 - ii) The reasons that the facilities were installed or modified without application for permission or notification
 - iii) Corrective measures, measures to prevent reoccurrence

1. Status of Observance of High Pressure Gas Safety Law at Hamaoka Nuclear Power Station

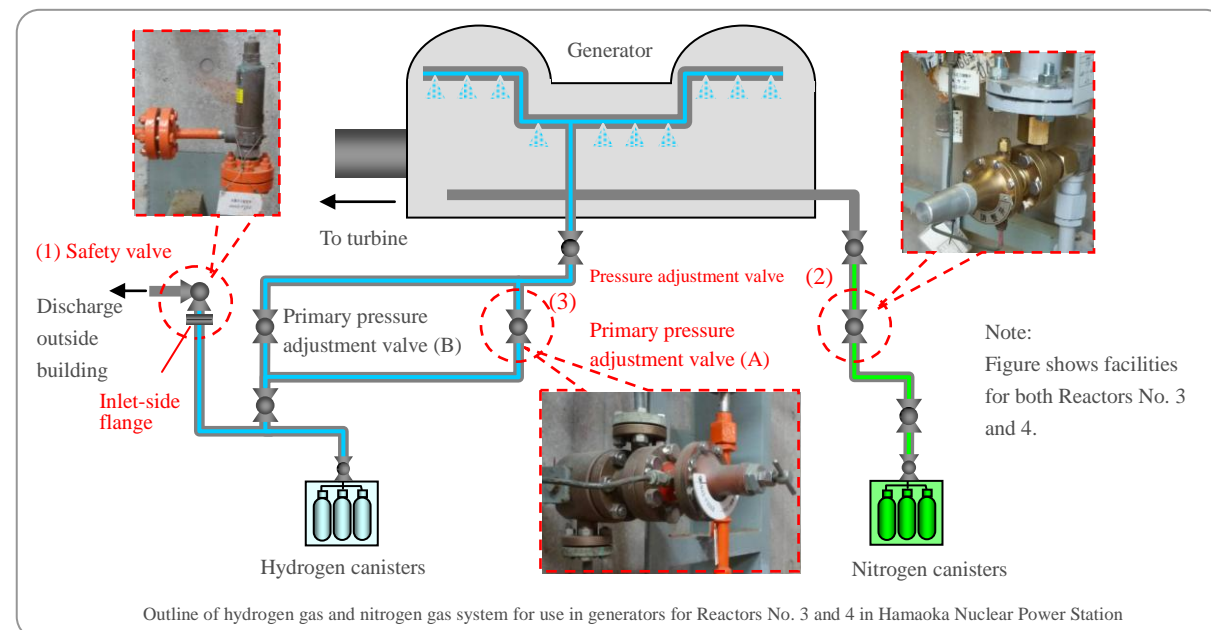
- No omissions in permission application or notification procedures occurred at time of installation of high-pressure gas facilities (Total: 15 facilities).
- A check of the status of observance of permission application and notification procedures when modifications have been made indicated that omissions in construction permission application and notification procedures occurred in relation to the replacement of three valves in auxiliary facilities for the generators in Reactors No. 3 and 4, for a total of seven instances.

<Overview and purpose of facilities that were modified without permission application or notification>

Name of facilities: Hydrogen and nitrogen storage facilities for Reactors No. 3 and 4

Storage capacity	Compressed hydrogen gas	1,128 m ³
	Compressed nitrogen gas	846 m ³
Purpose	Hydrogen gas: Cooling of generators. Nitrogen gas: Safety (prevention of fires in generators).	

<Overview of omission of construction permission application and notification procedures>



Reactor	Name of device	Overview of omissions in permission application and notification procedures
No. 3	(1) Hydrogen gas safety valve for generator	Omission of notification following replacement of valve in December 1997 (one time) Omission of application for permission for replacement of inlet-side flange in this valve in December 1997 (one time)
	(2) Nitrogen gas pressure adjustment valve for generator	Omission of application for permission when valve was replaced by spare for inspection in October 2002 and when the original valve was replaced in April 2006 (two times) Omission of application for permission when valve was replaced by spare valve for inspection in March 2008 and when the original valve was replaced in December 2010 (two times)
No. 4	(3) Primary hydrogen gas pressure adjustment valve (A) for generator	Omission of application for permission when valve was replaced in October 2002 (one time)

2. Reasons for Modification without Permission Application or Notification

It is conjectured that these instances of omission of the permission application and notification procedures required by the High Pressure Gas Safety Law occurred for the following reasons.

- In-house rules have been formulated in relation to determining the necessity for applications for permission and notification required by the relevant laws at the construction planning stage, but small-scale work such as the replacement of parts with parts of the same specifications (replacement of valves, etc.) and regularly scheduled work such as the replacement of parts with spares was regarded as falling outside the scope of these rules.
- It was mistakenly judged that the replacement of parts with parts of the same specifications did not represent modification work. In addition, management procedures were erroneous, with “When modified” being indicated in the “When to submit” column on the management table for documentation for submission to the relevant agencies.

3. Measures to Prevent Reoccurrence at Hamaoka Nuclear Power Station

(1) Corrective measures (measures to be implemented as soon as possible)

Chubu Electric will implement the following corrective measures as soon as possible in relation to the problem points determined by the survey of the causes of the incidents.

◆ Improvement of in-house rules concerning work procedures required by the High Pressure Gas Safety Law

- The rules concerning judgment of the necessity for application for permission and notification at the construction planning stage will be revised to incorporate checks in relation to regularly scheduled work. In addition, the fact that application for permission and notification must be made when replacing parts with parts of the same specifications will be clearly stated on the management table for documentation to be presented to the relevant agencies.
- Management staff possessing the requisite knowledge, and working in areas unrelated to construction processes, will review construction plans and other documents from the perspective of observance of the relevant laws, and will do their utmost to prevent any similar occurrences.

(2) Measures to prevent reoccurrence

Chubu Electric Power is at present proceeding with surveys to determine whether any similar instances have occurred within the company, and will put in place measures to prevent any reoccurrence based on the results of those surveys. In addition to such measures, the following measures to prevent a reoccurrence of this situation will be put in place at Hamaoka Nuclear Power Station.

	FY 2010	FY 2011			
	4 th quarter	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
◆ Review and development of in-house rules related to laws Review and development of in-house rules to enable correct implementation of procedures required by the stipulations of construction-related laws.	Formulation of review methods	Review of laws and company rules	Development of in-house rules		
◆ Enhancement of review system Construction of system with associated rights and responsibilities as framework to enable checks in relation to operations related to construction procedures, etc. required by the relevant laws.		Examination and development of system		Enhancement of review system (commencement of operation)	
◆ Check of status of implementation measures to prevent reoccurrence <1> Check of status of implementation by internal review <2> Check by external specialist organization			<1> Internal review by independent company body (2 nd half of FY 2011)		<2> Check by external specialist organization (2 nd half of FY 2011)