

Countermeasures to Prevent
Recurrence in line with the Inspection
Results Relevant the Power Plants

April 6, 2007

Chubu Electric Power Co., Inc.

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1 Outline of Countermeasures for Preventing Recurrence

We have verified to establish whether the safety of the power plants is flawed due to incongruous phenomena (hereinafter called "Incongruous Phenomena") and have carried out inspections to assess whether there are falsification of data and deficiency and suchlike in the required procedures and other similar problems in relation to the hydraulic, thermal, and nuclear power plants in accordance with the instructions (the Nuclear and Industry Safety Agency Issue No 1 of November 30, 2006) "Concerning the Inspection of Electric Power Plants" received from the Ministry of Economy, Trade and Industry, Nuclear and Industry Safety Agency.

According to the inspection results, we have extracted 40 cases of "Incongruous Phenomena". (Already disclosed in March 30, 2007)

Our company is striving to stop emphatically the factors that are responsible for the incongruous deed and the existing climate that lead to this kind of deeds. The company is enforcing thoroughly countermeasures for preventing their recurrence as to ensure that these kinds of incidents never occur again, under the strong determination of the top echelon, and the company is engaged in continuously improving these countermeasures.

The present report is consolidated report concerning the countermeasures for preventing recurrence (Action plan) for the company as whole.(Please refer to attached document)

2 The Results of the Inspections

We have verified that there are 40 cases of Incongruous Phenomena as shown in Table 1 according to the results enforced inspection of the power plants.

We have verified the fact that under the present state, the incongruous incidents did not compromise the safety of each nuclear, thermal and hydraulic power plant.

Table 1 Verified incongruous cases (Assessment division by the number of cases)

Power Plant	Assessment Division					Total
	A	B	C	D	-	
Nuclear Power	0	1	6	1	6	14
Thermal Power	0	2	9	3	1	15
Hydraulic	0	0	9	2	0	11
Total	0	3	24	6	1	40

Assessment Division

Assessment Division	Comments
A	Items that conflict with safety provisions and regulations and items that have damaged the safety of the facilities.
B	Items that conflict with safety provisions and regulations, and which entail repairs of facilities.
C	Items that conflict with safety provisions and regulations
	Items that conflict with safety provisions and regulations, and Items that are carried out extensively or continuously
D	Item that may conflict with safety provisions or regulations.

Note) Laws: Laws, Agreements between local authorities and the company regulation.

3 Analysis of the Primary Causes of the Incongruous Cases

Concerning each of the respective incongruous cases, we have extracted the following six (6) items as the direct causes of these cases, after analyzing the cause and particulars of the occurrence.

- (1) Mistaken interpretation of the laws and insufficient understanding of the laws
- (2) Lack of awareness to adhere to the standards and rules
- (3) Indented omission to explain the facts to the inspection officers and to the chief engineers
- (4) Preference to secure supply capability
- (5) Shying of being questioned by the head of the division/ superiors
- (6) Simple mistakes (Insufficient awareness)

Concerning either any of the causes, there is a systematic cause in the background (Climate/ the culture of the organization/ customs and suchlike) that has an impact and we may conclude that there was a problem with the physical makeup of the organization of the company.

4 Compliance Active Efforts until Now

The company is making efforts to enhance social awareness to comply and awareness of social responsibility demanded from the company. In addition, the company is striving to build a quality assurance structure and establish compliance while taking into consideration lessons of organizational accidents and deplorable events in other industries. These are being assessed as having reliable functions as means to control the occurrence of incongruous cases.

4-1 Building a Structure to Promote Compliance (From 2002)

In December 2002, a "Compliance Promotion Committee" chaired by the President was established, which is deploying its activities, and aims at establishing compliance based on the clarification of the performance check points, the performance standards, the proposals of the chairman message and publication of the compliance declarations.

In addition, we have established "Notifications Counter (Helpline)" and we have introduced a system whereby it is possible to directly consult with the lawyer or the internal "Helpline" by phone or by email for questions concerning compliance in the course of work or during activities in the company.

4-2 Introduction / Building a Quality System

Each power division has introduced/built a quality system in accordance with the stipulations of the laws or according to an autonomous system. We have formalized all the activities relevant to quality assurance and have clearly stipulated the procedures for creation of records, modification, verification, approval, and safekeeping or the procedure for keeping the evidence (Proof and warranty). In addition, concerning the implementation state of this, we have a system to provide internal inspection periodically and we improve consistently the system.

By introducing this system, we strictly create the records, reliably filter, and anchor the deeds to keep the evidence, and the system function as control against the falsification of data.

4-3 Maintenance of an Inspection /Testing System

In line with the above-mentioned quality insurance system, we have established an Atomic Power Testing Group and Security Supervision Group in the Internal Audit Office and we have improved their assessment and internal auditing functions.

In addition, we audit each division to check whether it is executing the operations in accordance with the policies and are making efforts to perfect the assessment mechanism and checking of operations.

5 Countermeasures for Preventing Recurrence

We have consolidated the primary causes of the above-mentioned incongruous cases and the countermeasures for preventing recurrence, in line with our active efforts until now. (Please refer to the attached document). In the future, the company will enforce thoroughly countermeasures for preventing recurrence, under the strong determination of the top echelon, and the company will engage in continuously improve these countermeasures.

In addition, we will tackle the following countermeasures for preventing recurrence, in addition to the social countermeasures, for each of the atomic power division:

- Application of the organization climate assessment relevant to the culture of safe atomic power based on the Japan Nuclear Technology Institute
- Perfection of the education relevant to safety culture actively using e-training owned by the Japan Nuclear Technology Institute
- Sharing of the information with affiliate corporations such as NUCIA information ((Nuclear Information Archives) and incongruent information
- Clarification of the standards and expansion of the scope for the NUCIA Quality Maintenance Information
- Cooperation with Japan Nuclear Technology Institute relevant to NUCIA operation
- Adoption of shared information with makers and electric power of each company through the BWR (Boling Water Rector) Entrepreneurs Consultative Council
- Design improvements of the transparency for the regulatory body by participating to the Power Plants Conventions of the Safety Inspector

6 Monitoring and Operation of the Countermeasures to Prevent Recurrence

Prior to the implementation of the said countermeasures for preventing recurrence, we shall examine concretely the enforcement of the policy for each of the concerned divisions, and share the information between divisions and deploy it horizontally.

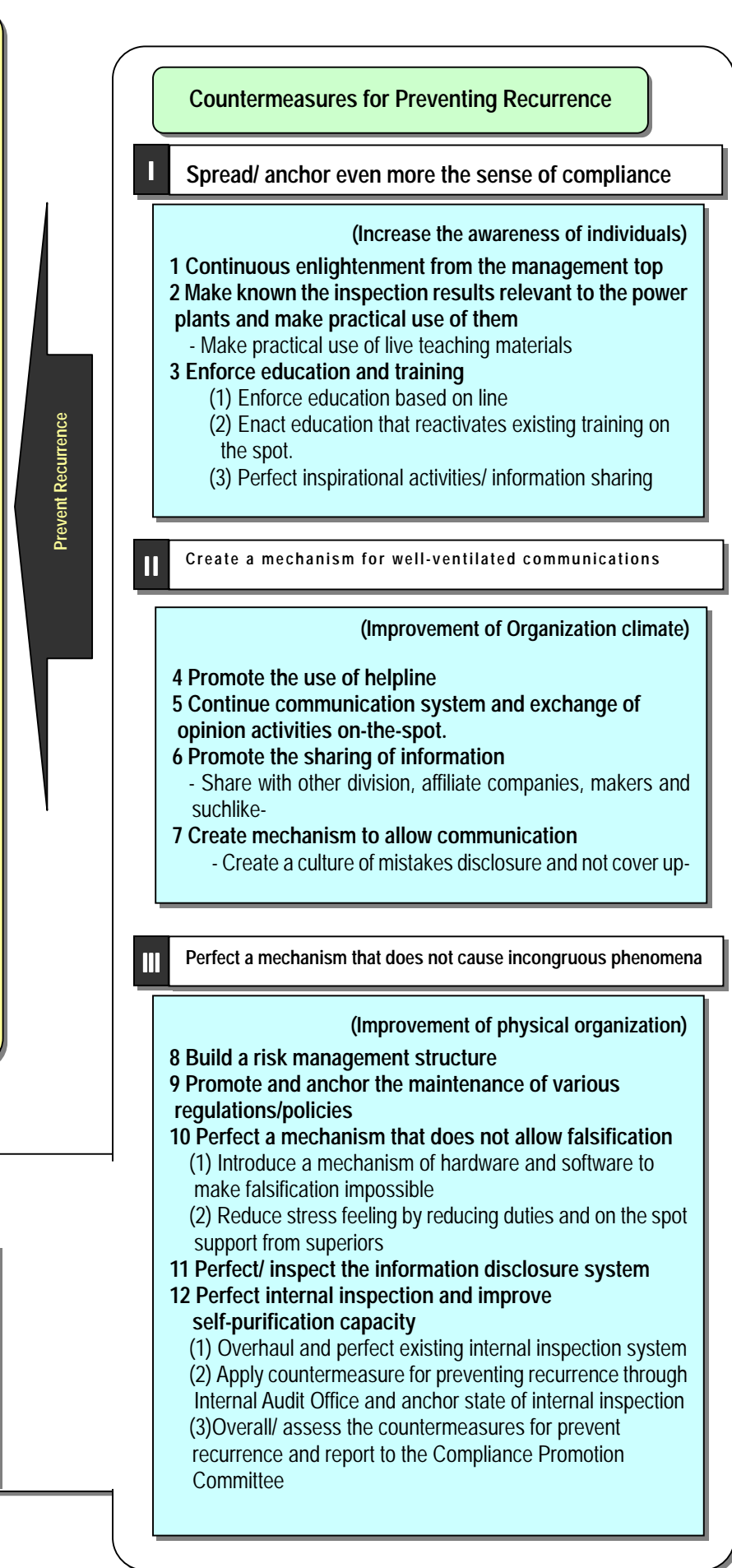
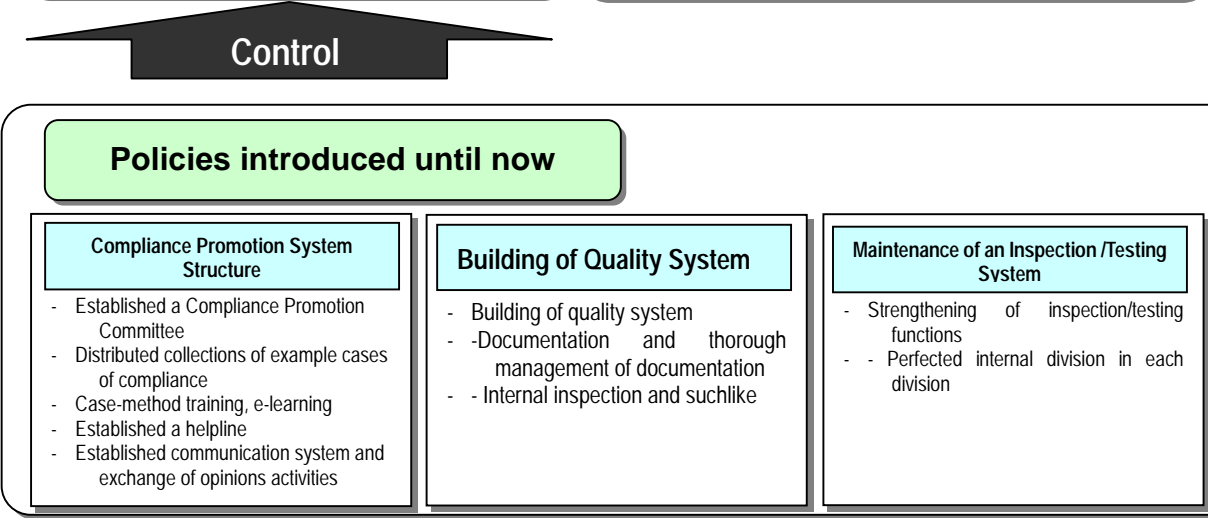
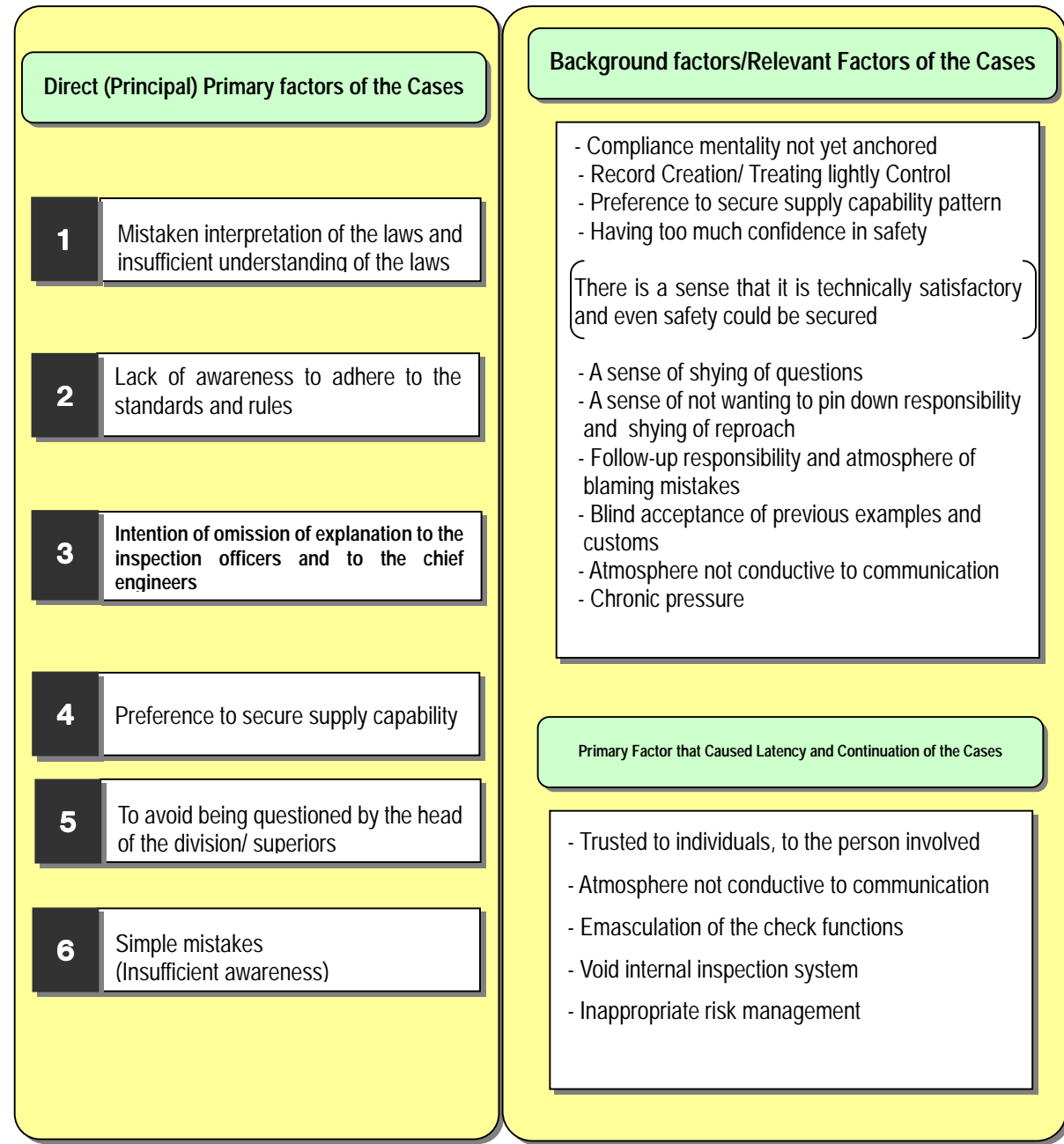
We shall assess periodically the state of operation/ anchoring and shall reflect the results to the next process.

Moreover, the Internal Audit Office shall enforce monitoring through inspection and shall take the appropriate corrective action.

Table 1 PDCA of the Countermeasures for Preventing Recurrence

April-June	July-September	October-December	January-March
<p>Make known Countermeasures for Preventing recurrence</p> <p><input type="checkbox"/> (P)</p> <p>Examine concrete Countermeasures</p> <p><input type="checkbox"/></p>		<p>(D)</p> <p>Apply Countermeasures</p>	<p>(A)</p> <p>Examine deployment for the following Year</p> <p><input type="checkbox"/></p>
	<p>Midterm assessment</p> <p><input type="checkbox"/> (C)</p>	<p>Monitoring (Inspection)</p> <p>(C)</p>	<p>End Year Assessment</p> <p><input type="checkbox"/> (C)</p>

Incongruous Cases	
Atomic Power Plant	(1) Deficient procedure in the piping replacement repair work for nitrogen replenishment
	(2) Inappropriate control of the temperature difference of water drainage/intake
	(3) Handling of unsuitable meter before the integrated performance test
	(4) Inappropriate adjustment of the reactor core spray type pump exit pressure gauge
	(5) Falsification of the verification record of the operation closure point at 10% at the principal vapor stoppage valve
	(6) Inappropriate response at the time of failure of the nuclear instrumentation (LPRM)
	(7) Inappropriate response at the time of failure of the nuclear instrumentation (SRNM)
	(8) Mistake in the computation method in the quarter report for the control of gaseous radioactive waste
	(9) Faulty communication report sent to the Operation Control Technical Expert Office
	(10) Inappropriate adjustment of the gauge record of the principal steam release safety valve exhaust gas temperature
	(11) Misadjusted level indicator the of (A),(B) light oil tank for the emergency diesel power equipment (Hamaoka No 3)
	(12) Misadjusted level indicator the of (A),(B) light oil tank for the emergency diesel power equipment (Hamaoka No 5)
	(13)Setting discrepancy of control for the flow transducer of the water supply flow meter of the atomic reactor
	(14)Wrong setting range of the condensed water tank level meter
Thermal Power Plant	(1)Inappropriate handling in the results of the inspection of the boiler facility
	(2)Data falsification of excess rated steam temperature (over 28 Celsius Degree)
	(3)A leading electric construction damage was not reported
	(4) Power failure accident not reported
	(5) Falsification of the inspection record of the power plant (Boiler/Turbine)
	(6) Inappropriate handling of excess power supply data
	(7) Inappropriate handling of the operation records in the safety daily record
	(8) Falsification of chart record
	(9) Inappropriate handling at the time of miss measuring of chart record
	(10) Inappropriate handling in the electric fault report
	(11) Rewritten inspection record at the factory location
	(12) Inappropriate application form for the construction of the backup boiler exhaust pipe according to the Building Standard Law
	(13)Falsification of the inspection record of the pressure resistance of the pipe for the dangerous substance based on the Fire Protection Law
	(14)Falsification of the inspection record of the inside of the fuel tank based on the Fire Protection Law
	(15)Inappropriate modification to the computing circuit of the condensate flow meter
Hydraulic Power Plant	(1) Inappropriate procedure relevant to the water channel connection duct installation work
	(2) Inappropriate procedure for the construction work to replace the electric transformer
	(3) Inappropriate procedure for the construction work in the river district/river safety district region
	(4) Inappropriate procedure concerning the land possession permission in the river district
	(5) Constrained handling of the quantity of water intake and quantity of water used
	(6) Inappropriate procedure concerning the water intake for cooling water and general service water
	(7) Inappropriate handling concerning the water intake not meeting the regulations for using water
	(8) Maximum processing of the submitted (approved) maximum output
	(9) Inappropriate procedure concerning the handing of the minimum quantity of dangerous substance
	(10) Falsification of the water level of the dam in the "Gate Operations Record"
	(11) Falsification of the measurement inspection record in the construction work completion inspection record



Prevent Recurrence

Countermeasures for Preventing Recurrence (2/2)

Item	Content	Promotion Department	Schedule						
			March	April-June	July-September	October-December	January-March 2008	April-	
				P (Plan)	C	D (Do/Apply)	C (Check)	A(Act/Deploy)	
1. Spread/anchor more the sense of compliance (Increase awareness of individuals)									
1	Continuous enlightenment from the management top echelon	The president shall communicate messages concerning thorough compliance to all the employees and the president shall directly talk with the employees in order to enhance their sense of compliance.	President	Message	Message	Enlightenment from the Management top Echelon (Direct talk with Employee)			
2	Make known the inspection results relevant to the power generation equipments and make practical use of them	Make known this time inspection results and practically use "Active Teaching Materials" to further anchor compliance awareness.	Each Department	Well-known		Application	Assess		
3	Enforce education and training	Enforce education based on line - Education of the Executive, Managers, Chief Engineers(Thoroughly make known the Federation of Electric Power Companies of Japan's action policies) - Education based on the line of the compliance promotion system - Education based on quality system - Group discussions	Each Department	Examine Education Method Teaching Materials/ Preparations		Enforce Education	Assess		
		Enact education that reactivates existing training on the spot. - Enforce education concerning the countermeasures for preventing recurrence and for the incongruous phenomena extract this time in the training for the newly appointed persons holding a position.	Training Department Each Department	Preparations		Enforce Education	Assess		
		Perfect inspirational activities/ information sharing Enact education relevant to safety culture and compliance based case-method training, lectures, and e-learning and suchlike.	Legal Affairs Department	Preparations		Enlightenment / Training execution	Assess		
2. Create a mechanism for a well ventilated communications (Improvement of Organization climate)									
4	Promote the use of helpline	Examine the effective utilization promotion policies based "Helpline" to discuss problems related to compliance and enforce them.	Legal Affairs Department	Examine Policies		Promote the Use of Helpline	Assess		
5	Continue communication system and exchange of opinion activities on the spot	Continue communication system and exchange of opinion and revise rules that are not reasonable and rules that do not meet the facts on the spot based on the offering of opinions on the job site.(Extract through discussions troubles of the job site)	Legal Affairs Department Each Department	Promotion of a Communication system and Exchange of Opinion Activities on the Spot			Assess		
6	Promote the sharing of information	Promote horizontal deployment and sharing of information including other Departments, affiliate companies, makers.(Atomic power to include NUCIA)	Each Department	Examine Method of Sharing		Information Sharing and Practical Application	Assess		
7	Create mechanism to allow communication*	Make efforts to create a climate whereby people openly communicate negative information instead of hiding it as to allow the information of mistakes and inexpedience to restore improvement of operations and technical quality.	Each Department	Examine Policies		Create Climate/ Policies Operation	Assess		
3. Apply a mechanism that does not cause incongruous phenomena (Improvement of physical organization)									
8	Build a risk management structure	Design risk management structure, and extract the incongruous phenomena that can be expected to materialize at each Department as risks, and operate PDCA to tackle thoroughly these risks.	Corporate Planning & Strategy Division Each Department	Design Structure		Deployment of Risk Management			
9	Promotion and anchoring of the maintenance of various regulations/policies	Maintain various regulations/ policies to prevent inappropriate procedures based on insufficient understanding or mistaken interpretation of the law and attempt to anchor them.	Each Department			Examine Various Policies/ Maintenance	Assess		
10	Perfect a mechanism that does not allow falsification	Examine both hardware and software, that have a mechanism to render falsification impossible, and introduce them. - Clarify procedure at the time of correcting the records and perfect the records check functions. - Destroy unnecessary records, measuring instruments and suchlike.	Each Department	Examine Mechanism		Enforce Mechanism	Assess		
		Perfect support on the job site from superiors and attempt to reduce stress by slimming down the operation.(Create an environment whereby people can concentrate on the operation)	Each Department	Examine Policies		Support on the Spot and Actualize Operations (duties) Slimming Down	Assess		
11	Perfect/ inspect the information disclosure system	Examine whether the system/ rule of information disclosure at each Department is maintained as not to get lost when assessing the necessity of disclosure and examine to perfect the system.	Each Department	Inspection		Enforce Suitable Information Disclosure	Assess		
12	Perfect internal inspection and improve self-purification capacity	Examine existing internal inspection system and examine to perfect the system.	Each Department Internal Audit Office	Inspection			Assess		
		Apply the present countermeasures for preventing recurrence and get the Internal Audit Office to inspect internally the state of their anchoring. Apply the present countermeasures for preventing recurrence and assess/ examine periodically the state of their anchoring and report these results to the Compliance Promotion Committee.	Each Department Internal Audit Office Legal Affairs Department			Internal Inspection of Countermeasures for Preventing Recurrence Compliance Promotion Committee Report			

*Use actively Safety-culture diagnosis based on the Japan Nuclear Technology Institute and extract weak points of the organization to make improvements.(Enforce at the Atomic Power Department and examine the deployment to other Departments)