

# Roles of the Nuclear and Industrial Safety Agency and the Nuclear Safety Commission

-- With Emphasis on the Follow-on Regulation and  
Regulator Activity Investigation --

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# *What is Follow-on Regulation? What is Regulator Activity Investigation?*

The nuclear regulations and practices have been enhanced and improved since the nuclear criticality accident of the uranium processing plant in 1999 (JCO accident) and the falsification of self-imposed inspection records by the electric utility in 2002.

This material overviews the nuclear safety regulations with emphasis on the following topics regarding the follow-on regulation by the regulatory agency and the regulator activity investigation by the Nuclear Safety Commission (NSC) :

1. The system for ensuring nuclear safety
2. Roles of the regulatory agency and NSC
3. Enhancement of safety regulation after the stage of establishment permit (hereinafter referred to as "follow-on regulation" (Note 1))
4. Regulator activity investigation for the purpose of improving regulations (Note 2)

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## **Note 1 Follow-on regulation:**

This term applies to the regulation after the stage of establishment permit of the nuclear installation.

Approval of design and construction methods, pre-service inspection, periodic inspection on facilities, inspection on the compliance with the fitness-for-safety program are the examples of nuclear safety regulation activities by the regulatory agencies (Ministry of Economy, Trade and Industry, Ministry of Education, Culture, Sports, Science and Technology, etc.).

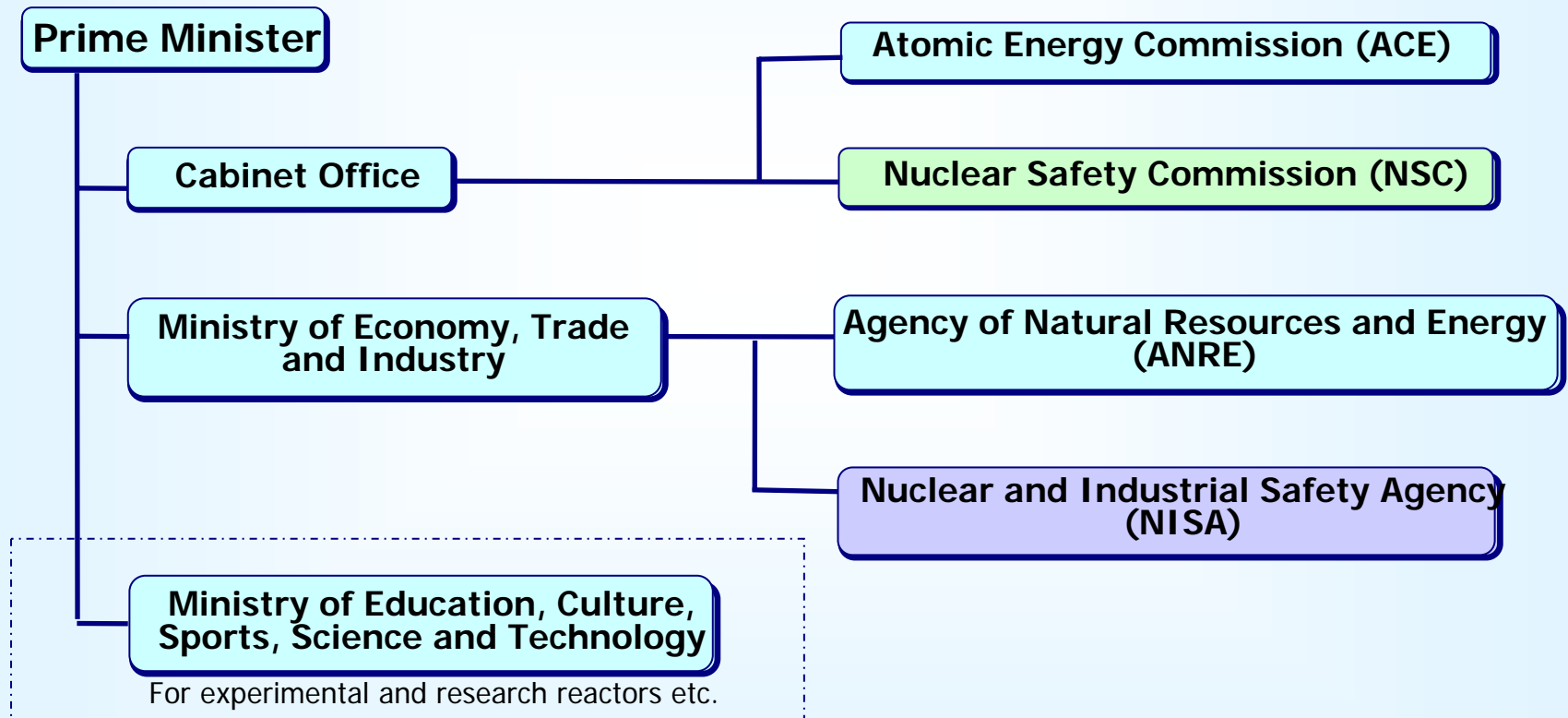
## **Note 2 Regulator activity investigation:**

This term applies to the oversight activity by the NSC on the follow-on regulation by the regulatory agencies.

It aims at promoting improvement of the rationality, effectiveness and transparency of the regulations.

# Structure of Nuclear Safety Regulation in Japan

Nuclear safety regulation in Japan is secured by a two-step regulatory process: the Nuclear and Industrial Safety Agency (NISA) who directly regulates electric utilities and the Nuclear Safety Commission who monitors and audits the regulatory agency's activities.



# Two-Step Oversight Process in Nuclear Regulation

If a nuclear power plant is newly constructed or added to the existing station, the licensee submits an application for the establishment permit.

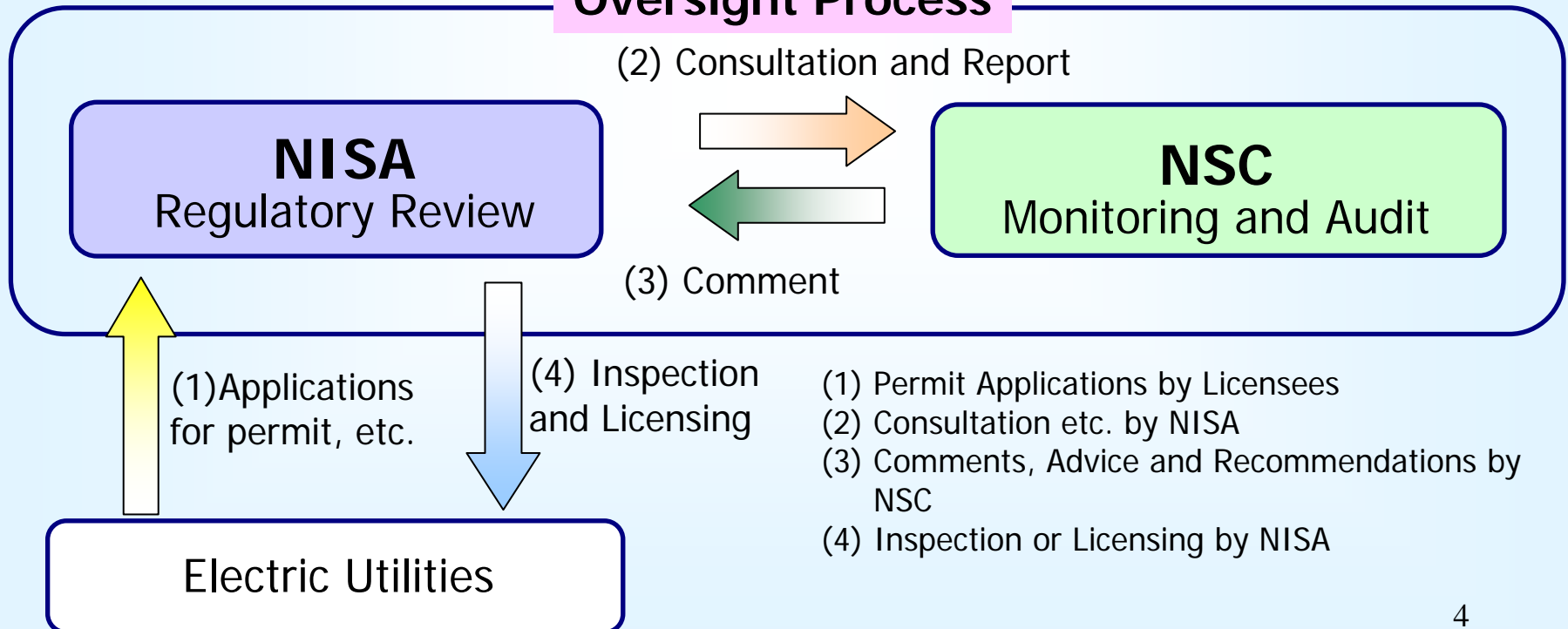
NISA reviews the application pursuant to the Act for the Regulation on Nuclear Source Material, Nuclear Fuel Material and Reactors (Reactor Regulation Act).

The Nuclear Safety Commission reviews NISA's review from different perspectives.

This process is referred to as the two-step review system.

NISA's review activity is also applied for the construction and operation stages in addition to the establishment permit stage. This is referred to as the "Follow-on Regulation."

## Oversight Process



# Background and Objective of Regulator Activity Investigation

## < The background >

- The regulator activity investigation started in 2000 after the nuclear criticality accident of a uranium processing plant in 1999.
- The strategic policy to investigate regulator activities was determined on March 3, 2003 with emphasis on technical and scientific rationale in the follow-on regulation, as the falsification of self-imposed inspection records by an electric utility was disclosed in 2002,
- The strategic policy was revised on July 1, 2004 based on the feedback from the subsequent experiences, new ideas and methodologies for the investigation.

## Mission of NSC

**Plans, deliberates and determines matters for ensuring nuclear safety**

Monitors and audits the activities in the follow-on regulation through the regulator activity investigation.

## Objectives of regulator activity investigation

- 1 Improvement in safety fitness levels of licensees by enhancing the rationale, effectiveness, and transparency of the follow-on regulation.
- 2 To secure safety and confirm the adequacy of regulatory activities for matters pointed out in the safety review oversight process.

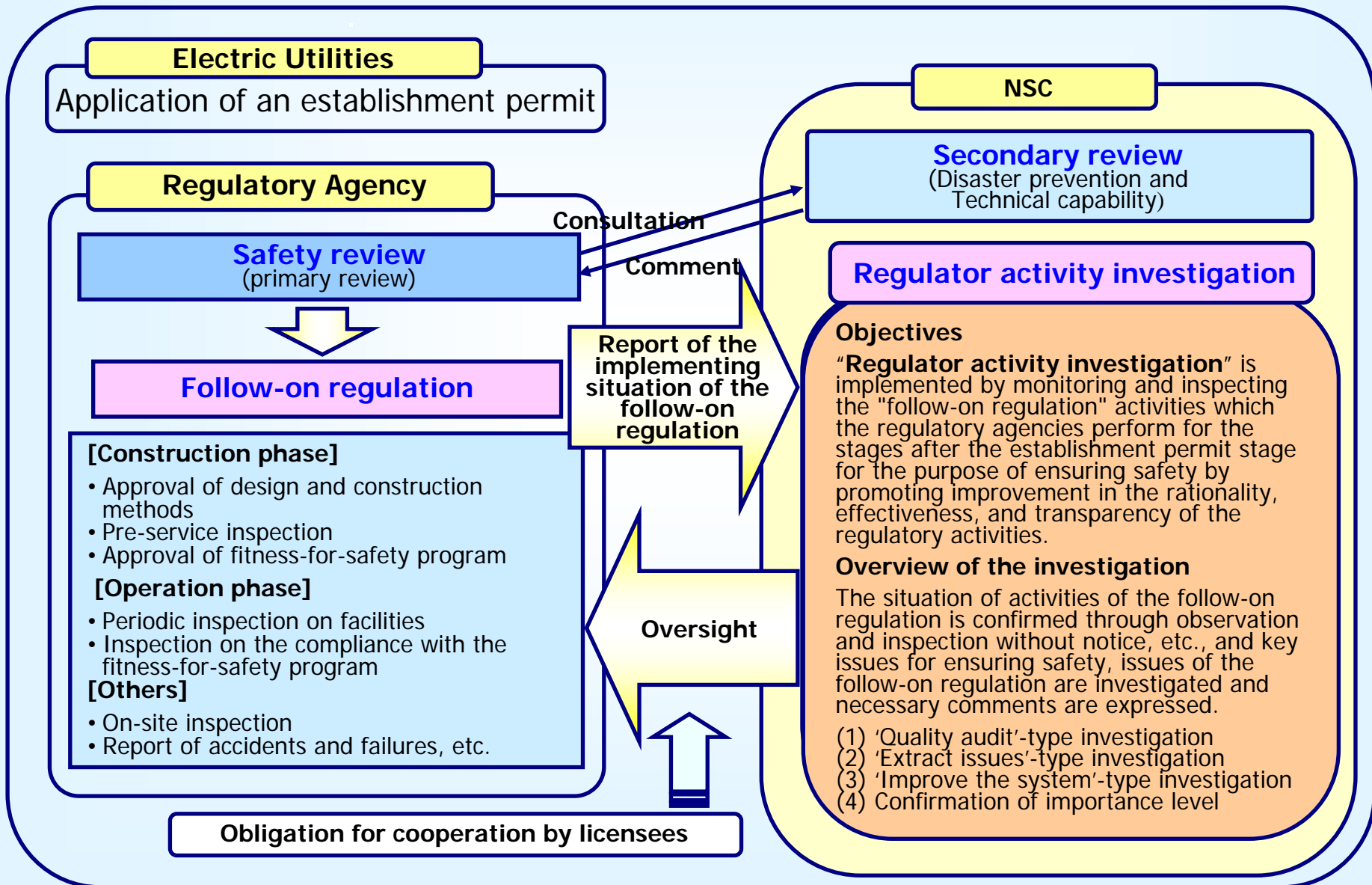
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Investigation methods are specified according to the "objectives" and "aims" of the regulator activity investigation.

# Aims and Methods of the Regulator Activity Investigation

Objectives	Types	Aims	Methods
1	(1) Regulator activity investigation on the entire activities for follow-on regulation. (Quality Audit Type)	Promote continuous improvement in the quality and transparency on the entire activities of the follow-on regulation.	Extract individual enforcement actions by sampling. Confirmation by quality investigation methods Witness by short notice
	(2) Regulator activity investigation on important issues identified in the follow-on regulation. (Subject Identification Type)	Promote improvement mainly in the practical rationality, effectiveness and transparency on the issues of safety importance in the follow-on regulation.	Understand actual circumstances by hearing the regulatory agency and licensees etc. Issue comments from different perspectives
	(3) Regulator activity investigation on issues of follow-on regulation. (System Improvement Type)	Propose sophistication on the current follow-on regulation.	Understand actual circumstances by hearing the regulatory agency and licensees Discuss how the system should be in the special committees based on the investigation results
2	(4) Regulator activity investigation on important matters identified in the safety review process.	Confirm the adequacy of regulatory activities to ensure safety fitness.	Investigate and analyze action policies of the regulatory agency on important matters.

# Flow of the Regulator Activity Investigation



# Investigation Results by NSC on Regulatory Activities (1/3)

## 1. Summary of the Interim Report Regarding Regulator Activity Investigation Concerning the Periodic Licensee's Inspection of Commercial Power Reactors

On July 28, 2003, NSC released an interim report regarding regulator activity investigation concerning the "Periodic Licensee's Inspection" applied to commercial power reactors from October 2003, and disclosed opinions on how the system should be and matters that should be taken into consideration in the implementation.

### 1. Viewpoint of the Investigation

- Clarification of the responsibilities of the national government and licensees in the regulations
- Ensuring the rationality and effectiveness of the inspection and examination
- Ensuring the transparency of results and processes

### 2. Opinion of NSC

- The basic framework is appropriate for prevention of recurrence of the TEPCO's falsification occurred recently.
  - For inspection items etc., utilization of industrial standards is effective to reflect the latest knowledge and it is expected to promote licensee's independency and sense of responsibility.
- 1) The regulations (relationship between the periodic licensee's inspection and the periodic inspection and the fitness-for-safety inspection) are judged to be the ones which do not cause any confusion in the working field at the operation stage, as mutual positioning is clearly defined, and the regulation is systematized with acceptable rationality and position clarification beforehand. Moreover, the periodic safety management review (note 1) should confirm the establishment of quality assurance which prevents an overlook important to safety.
  - 2) For the periodic licensee's inspection and the periodic safety management review (note 1), the following are required:
    - Revision of industrial standards with appropriate frequency;
    - Construction of the framework that enable prompt evaluation and approval by the regulatory agencies; and
    - Effective leadership by the consultation (note 2) for licensees to improve their activities for ensuring safety.
  - 3) For the Periodic licensee's inspection and the periodic safety management review. etc., the following are required:
    - Long-term preservation of inspection records of items that are required for integrity evaluation;
    - Ensuring the traceability of records of inspection, examination and assessment; and
    - Development of the framework easily to access to the result.
  - 4) For the role sharing between the national government and licensees, the following are required:
    - Positive public disclosure inspection procedures of periodic licensee's inspection by licensees;
    - Clarification of judgment and responsibilities of licensees;
    - Clarification of the review criteria by the national government; and
    - Improvement of training programs for maintaining and improving inspectors' technical capability.

※1 Periodic Safety Management Review: Review conducted by the Japan Nuclear Energy Safety Organization on the implementing system of the licensee who conducts the periodic licensee's inspection

※2 Assessment: Comprehensive evaluation by the national government based on the result of the periodic safety management review conducted by the Japan Nuclear Energy Safety Organization

# Investigation Results by NSC on Regulatory Activities (2/3)

## 2. Summary of the Interim Report Regarding regulator activity investigation Concerning Quality Assurance of Fitness-for-Safety Activities at the Operation Stage

**On September 25, 2003, NSC released an interim report regarding the regulations for the quality assurance that was applied to the fitness-for-safety activities for nuclear installations from October 2003, and disclosed opinions and views on matters that should be taken into account in the considerations and implementation of the rules mainly on nuclear power facilities.**

### 1. Viewpoint of Investigation

- Are the regulations and the implementation rational and effective for ensuring safety?
- Are the transparency of the results and processes ensured?

### 2. Basic Principles of NSC

- 1) Licensees should construct a systematic and functional management system that clarifies responsibilities and roles.  
Utilizing the PDCA (plan-do-check-act) process is efficient for enhancing safety.
- 2) Licensees should make self-imposed efforts and should be committed to improving quality assurance activities.
- 3) The regulatory agencies should take into account for ensuring oversight effectiveness and transparency of regulation.

### 3. Opinion of NSC

- 1) Regulations under study by NISA is generally judged to be rational and effective.
- 2) Fuel fabrication facilities, reprocessing facilities, reactor facilities for experimental use, etc. other than nuclear power facilities should be regulated appropriately taking account of the uniqueness of the facility due to a wide range of business structures and facility sizes.
- 3) For the approval of the fitness-for-safety program, it is required to review the operability of the licensee's quality assurance program other than the conformance to the regulatory requirements.
- 4) It is required to feedback the results of the fitness-for-safety inspection on the acceptance criteria which are used in judging the appropriateness of the quality assurance activities.
- 5) Precise education and training programs are required for inspectors who inspect the quality assurance activities based on the individual needs.

# Investigation Results by NSC on Regulator Activities (3/3)

## 3. Results of Regulator Activity Investigation on the Safety Regulations After Cessation of Operation of Reactor Facilities

Based on the "Strategic Policy of regulator activity Investigation (Revised on July 1, 2004) "

### 1. Background

Under the current safety regulations, reactor facilities after cessation of operation are regulated by almost the same regulations as those of the operating facilities such as the periodic inspection, the inspection conformity with the fitness-for-safety program, the on-the-spot inspection, the accidents and failures report, while the detailed technical standards concerning ensuring safety of dismantling work are not fully prepared.

NSC started the regulator activity investigation on the implementation of the rules in July 2004.

### 2. Results of Investigation

- 1) The regulator agencies confirms the safety of the reactor facilities during dismantling based on the current safety regulations.
- 2) The current safety regulations place emphasis mainly on the regulation required for the establishment and operation of nuclear reactors, and regulatory consideration is not sufficiently after the cessation of power operation. Therefore, step-by-step establishment of the safety regulations is necessary in accordance with the advancement of dismantling and the significance for ensuring safety.
- 3) The regulatory agencies are requested to start review of the safety regulations after the cessation of operation taking into account the features of commercial power reactors and experimental research reactors.

### 3. Future Actions

Safety regulation after the cessation of operation is also a generic issue for other nuclear installations. Therefore, it should be studied in the Special Committee for Radioactive Waste and Decommissioning taking into account the features of each facility and the consistency of safety regulation.

# Event Chronology Regarding Nuclear Safety

<b>September 30, 1999</b>	<b>JCO Nuclear Criticality Accident</b>
<b>December 17, 1999</b>	<b>Proclamation of the Special Law for Nuclear Emergency</b>
<b>June 16, 2000</b>	<b>Implementation of the Law Above</b>
<b>July 3, 2000</b>	<b>Report by a Person Who Works for GE and Lives in USA Concerning the Content of Report on the Inspection Activity Conducted in 1989 at the Unit 1 of the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Co., Inc.</b>
<b>January 6, 2001</b>	<b>Start of NISA</b>
<b>February 22, 2002</b>	<b>In Accordance with the Law of Special Measures for Nuclear Disaster, Offsite Centers were Designated as Strategic Facilities for Emergency Measure Operation (Four Sites).</b>
<b>December, 2002</b>	<b>Amendment of the Electricity Utilities Industry Law and the Law for the Regulation on Nuclear Source Material, Nuclear Fuel Material and Reactors</b>
<b>March 3, 2003</b>	<b>Strategic Policy on the Regulatory Activity Investigation</b>
<b>July 28, 2003</b>	<b>Regulator Activity Investigation on the Periodic Licensee's Inspection of Commercial Power Reactors (Interim Report)</b>
<b>September 25, 2003</b>	<b>Regulator Activity Investigation on Quality Assurance of Fitness-for-Safety Activities at the Operation Stage (Interim Report)</b>
<b>October 1, 2003</b>	<b>Start of the Japan Nuclear Energy Safety Organization</b>
<b>October 2003</b>	<b>Application of the Periodic Licensee's Inspection to the Commercial Power Reactor Facility</b>
<b>July 1, 2004</b>	<b>Strategic Policy of the Regulatory Activity Investigation</b>
	<b>Regulator Activity Investigation Without Notification</b>
	<b>Study on the Issues of the Present Regulation System</b>
<b>July 26, 2004</b>	<b>Determination of implementation on the Regulator Activity Investigation by NSC</b>
<b>October 14, 2004</b>	<b>Investigation Results on Regulatory Activities for the Safety Regulation After Cessation of Operation of Reactor Facilities</b>

This material addressed the regulator activity investigation on cases enclosed by frames so as to explain the roles and activities of the regulatory agency and the NSC. 11