


ENHANCEMENT OF SAFETY CULTURE IN CHINA: VISION AND GUIDELINES

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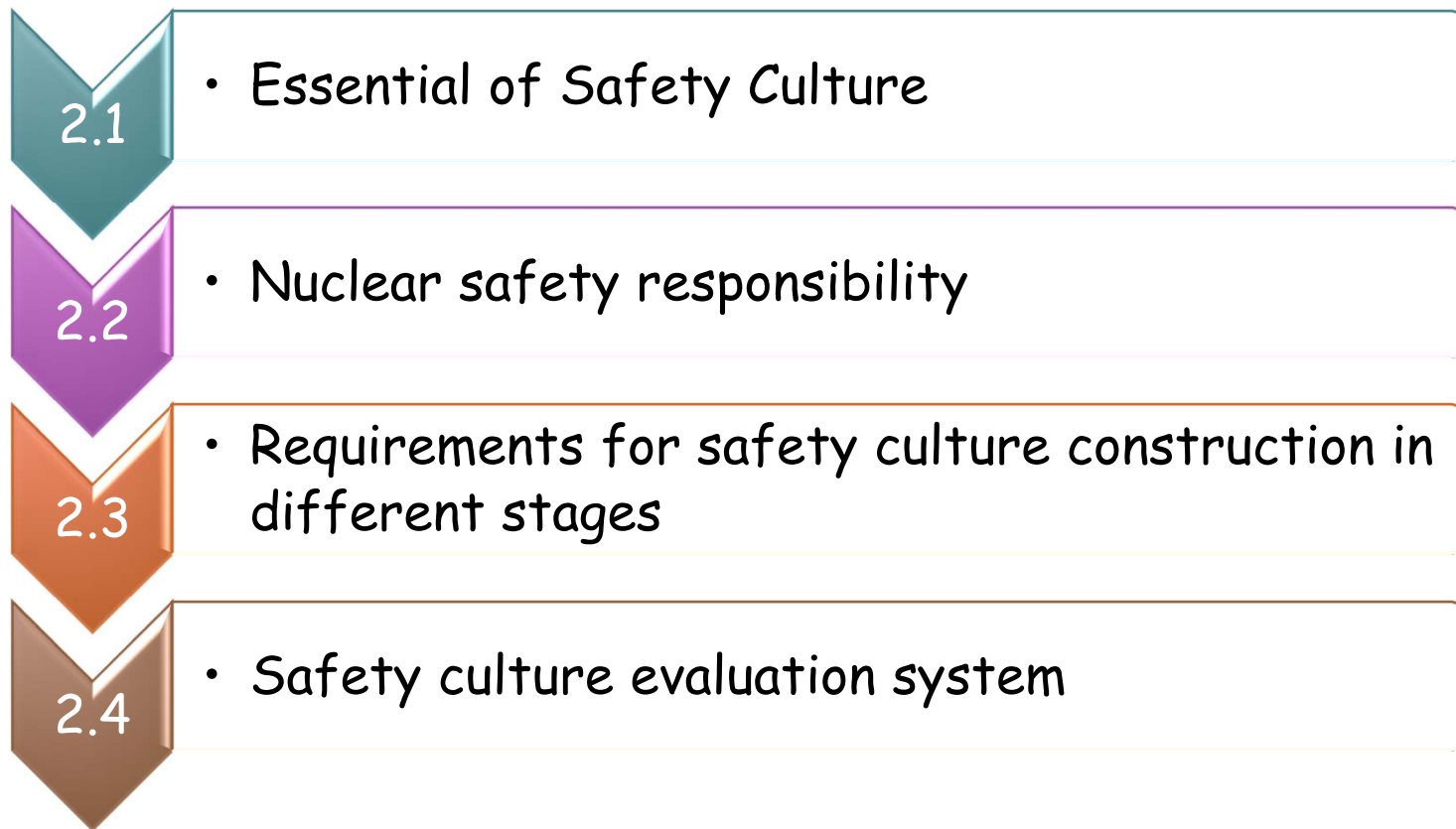
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Description of safety culture
 - 3 Guidelines: Key requirements of
safety culture construction

1. Agenda

- Safety culture have been established: advanced concept and good practices around the world, Chinese traditional management culture.
- Consensus: enhance the security level.
- "safety first, quality first" oriented .
- NNSA: management requirements, safety culture assessment.
- Need to be further strengthened: ① Fukushima daiichi, flaw; ② rapid development, challenge.

2. Vision: Description of safety culture in China

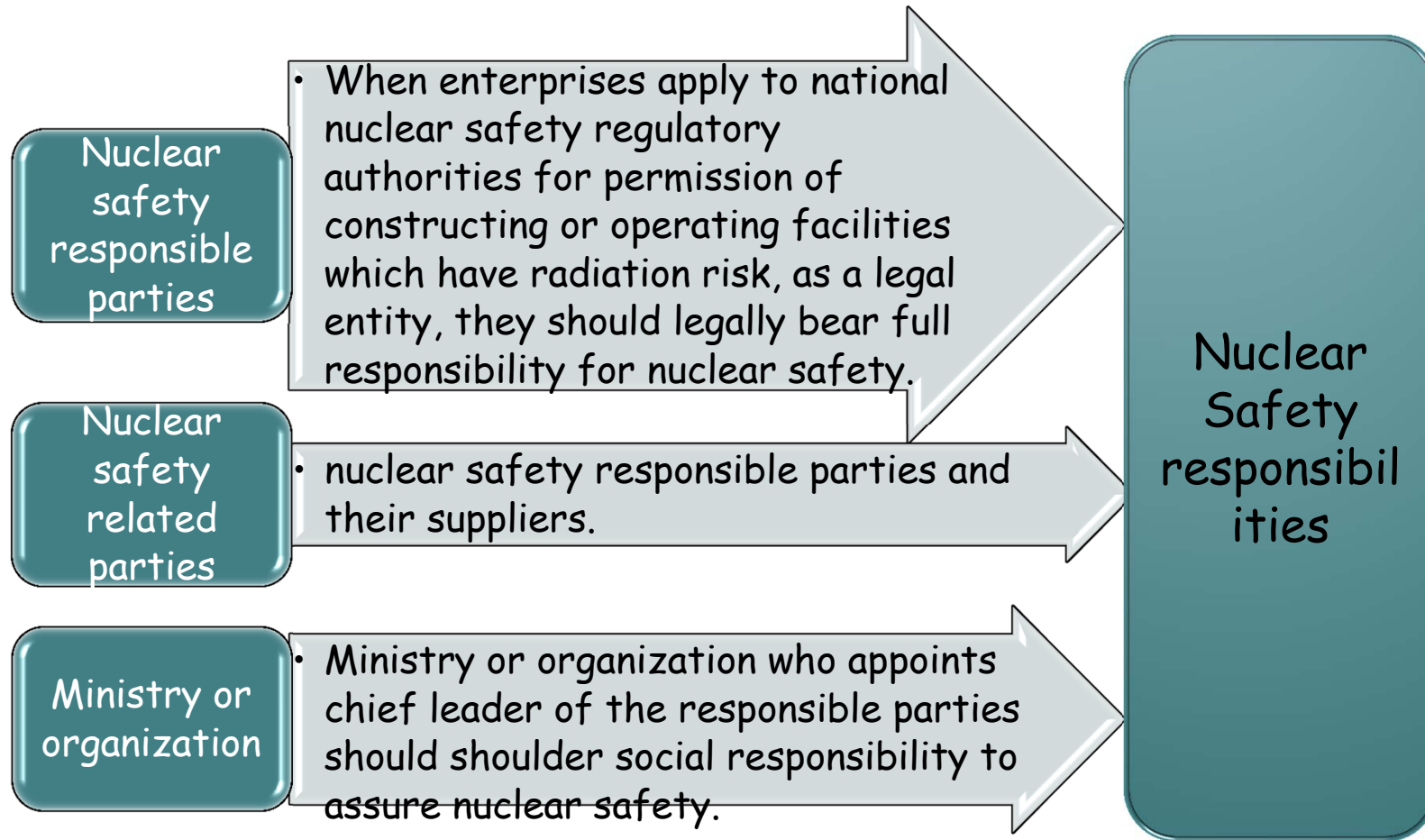




2.1 Essential of Safety Culture

- Safety and quality are regarded as an overriding priority in safety culture.
- Government, enterprises and public respectively play different roles but equally in importance.

2.2 Nuclear safety responsibility



Nuclear safety responsible parties

- Bear full responsibility for nuclear safety.
- Ensure industrial safety, environmental safety, occupational safety, nuclear security.
- Establish and implement nuclear safety quality assurance system and safety culture management system.
- Responsible for safety performance of their own and their suppliers and employees' nuclear safety-related behavior.

Nuclear safety related parties

- Conform to the principle of "safety first, quality first" in safety related activities.
- Establish and implement nuclear security quality assurance
- Ensure the quality of products and services.
- Establish and implement management system of safety culture construction.

Ministry or organization

- Shoulder social and political responsibility for nuclear safety.
- Guide safety culture construction.



2.2 Nuclear safety responsibility

- National nuclear safety regulatory authorities:
- Promote development of **regulations** related to safety culture construction and **nuclear safety quality assurance system**.
- **Promote and supervise** safety culture construction activity at all levels.



2.3 Requirements for safety culture construction in different stages

- The development of safety culture could be described as three levels and there's one key word for each: procedure, initiative, custom.



- All of nuclear related behaviors are legal, in other words all procedures could be honestly executed.
- In first stage, nuclear safety related parties should establish procedure culture in its domain, and their activities should strictly comply with nuclear safety regulations and existing procedure. Requirements of procedure culture are summarized in practice as follow: "everything is responsible for, everything is according to rules, everything is well supervised, and everything is well documented."



- Everyone desires to improve one's work and makes continuous efforts.
- In second stage, nuclear safety related parties should promote professionalism and responsibility of employees, and encourage employees to continuously improve safety. Employees' professionalism and responsibility derive from the promising vision of the entities, the recognition of chief leaders' objective, job satisfaction and sense of honor, good publicity and education, as well as well designed and operated responsible system and regulation mechanism.



- Everyone regards safety and quality as an overriding priority, especially chief leaders.
- In the third stage, nuclear safety related parties generally meet requirements of safety culture construction. The chief leader always consciously comply with the principle of "safety first, quality first" in making decision.
- Their consciously action derives from concern on the entities' future and the fate of employees, the awe and respect of laws and regulations, as well as guidance of government departments who appoint the chief leader of nuclear related parties.



2.4 Safety culture evaluation system

- Establish quantitative indicators, and evaluate periodically safety performance of nuclear safety related parties.
- Assessment of the weakening on safety culture, as well as management measures would be taken should be included.

3. Guidelines: Key requirements of safety culture construction

- 3.1 • Continuously Improved Procedure
- 3.2 • Supervisor should shoulder responsibility equal to their power
- 3.3 • Conservative and well verified technique
- 3.4 • Everyone is encouraged to participate in improving nuclear safety
- 3.5 • Good working environment and atmosphere
- 3.6 • Thoroughly investigation and feedback
- 3.7 • Open and transparent
- 3.8 • Activities isolation



3.1 Continuously Improved Procedure

- develop, review, approve, release and learn, evaluate, revise, execute.
- That's the **first step** of all to enhance safety culture construction.

3.2 Supervisor should shoulder responsibility equal to their power.

- Supervisors' responsibility and authority should be **clearly clarified** in organization structure.
- **Directly** managed by chief leader.
- Granted enough **authority**.
- Maintain its **independency**.



3.3 Conservative and well verified technique.

- Clear standard, sound design, stable process, and reliable technology are preconditions for good quality and safety of nuclear facilities.
- Confirm at the beginning of the construction of nuclear facilities and nuclear safety device activity.

3.4 Everyone is encouraged to participate in improving nuclear safety.

- Encourage employees to work with questioned attitude, strict and cautious approach, and custom of exchanging information.
- Ensure that employees report safety events, attempted events and other behavior or status effected nuclear safety with **impunity**.
- Maintain **continuous and direct contact** between employees and chief leader.



3.5 Good working environment and atmosphere

- Good working environment, places to rest, fluent working orders.
- Take full account of the employee's **physical and mental status** when work overtime due to progress and financial factors.

3.6 Thoroughly investigation and feedback

- Management weaknesses organization or quality assurance system should be **examined** when quality events or operation events occur, and take correction to prevent similar incidents from recurring.
- Nuclear safety related parties should pay attention to feedback work. It should be regarded as weakening of safety culture that similar incidents **reoccur**.



3.7 Open and transparent

- Initiatively **issue information** to the public when quality or safety events occur.
- Initiatively launch **peer reviews** on safety culture construction among them.

3 .8 Activities isolation

- Nuclear related activity should be **isolated from others**. Due to extremely importance of nuclear safety, costs and requirements of nuclear safety related activities are different from those of others.



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