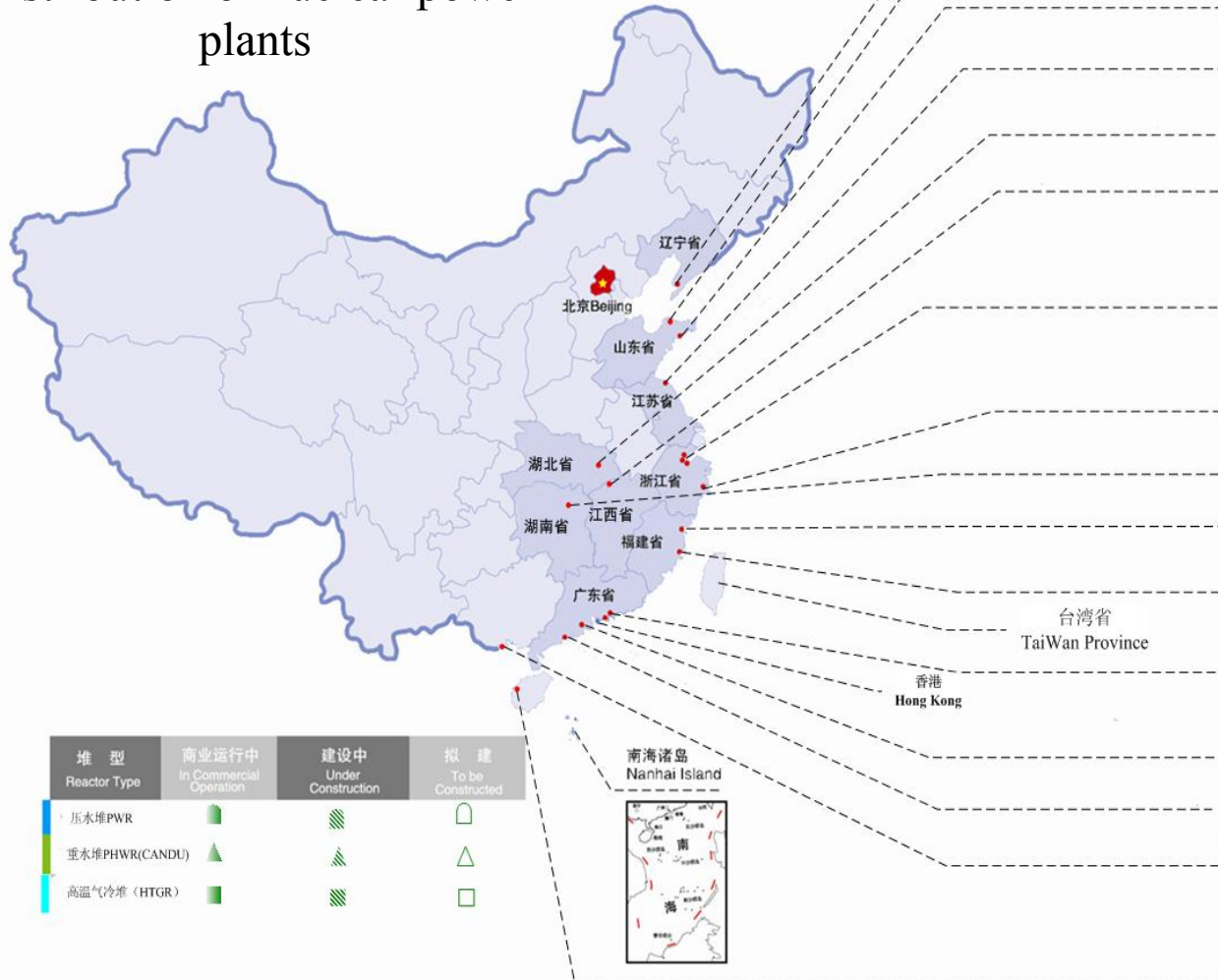


**NUCLEAR SAFETY EMERGENCY  
GOVERNANCE FOR PUBLIC TRUST  
BUILDING IN MAINLAND CHINA**

12 JUNE 2014, HKU

# □ facilities and activities under governance

## Distribution of nuclear power plants

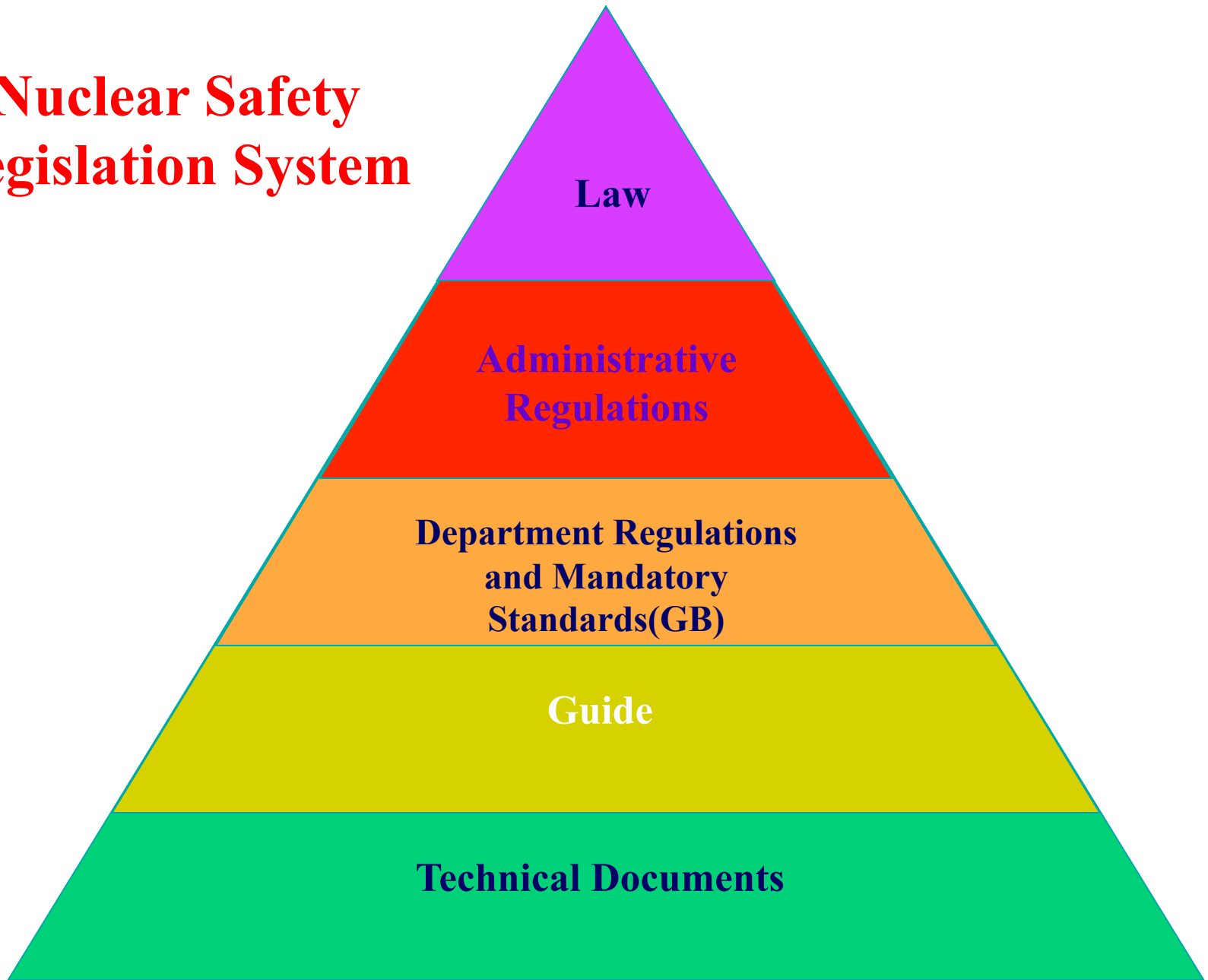


堆型 Reactor Type	商业运行中 In Commercial Operation	建设中 Under Construction	拟建 To be Constructed
压水堆PWR			
重水堆PHWR(CANDU)			
高温气冷堆 (HTGR)			

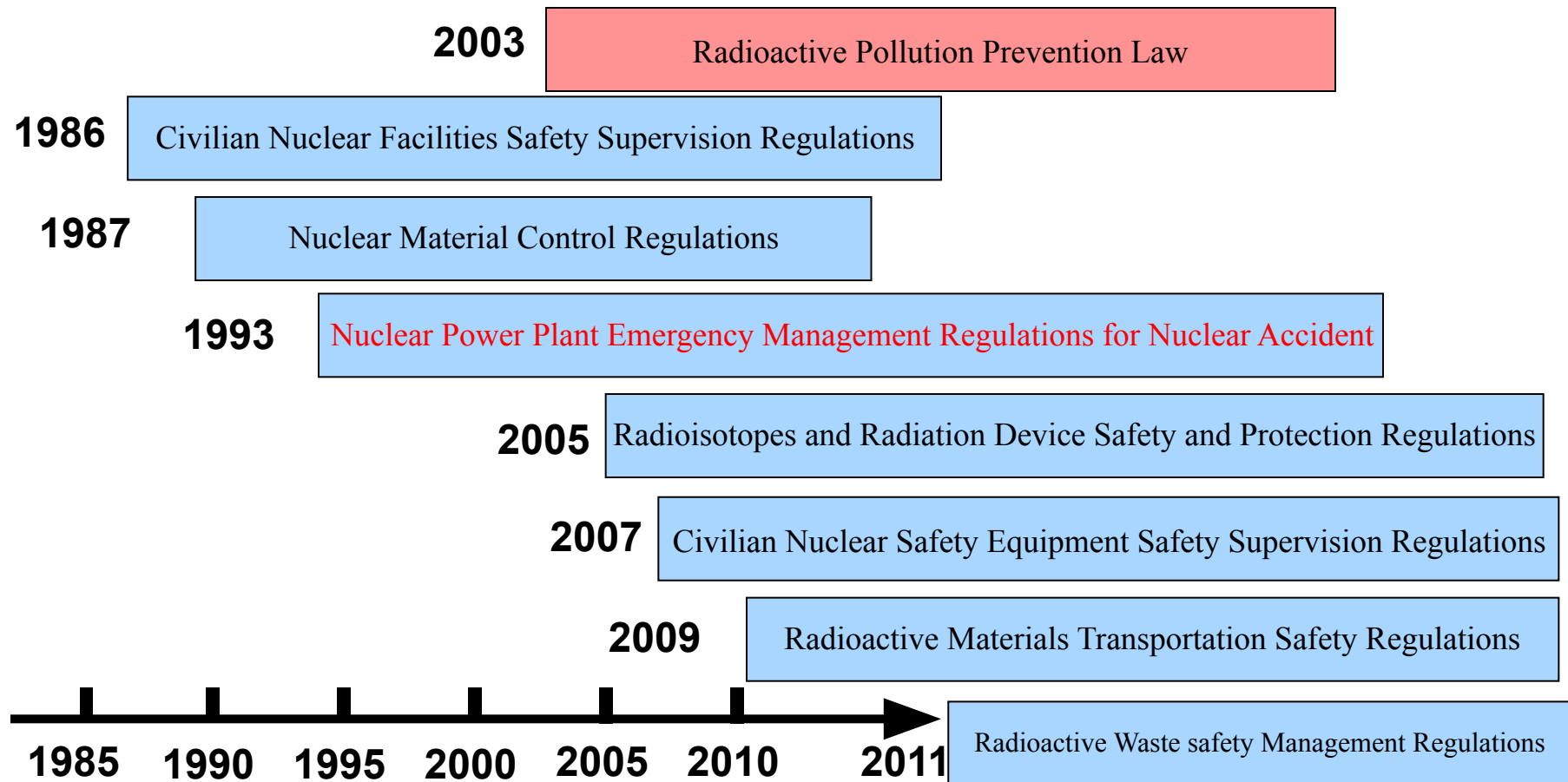
- 红沿河核电厂  
Hongyanhe NPP
- 石岛湾核电厂  
Shidaowan NPP
- 海阳核电厂  
Haiyang NPP
- 田湾核电厂  
Tianwan NPP
- 咸宁大畈核电厂  
Xianning NPP
- 彭泽核电厂  
Pengze NPP
- 秦山核电厂  
Qinshan NPP
- 秦山第二核电厂  
Qinshan Phase II NPP
- 秦山第三核电厂  
Third Qinshan NPP
- 三门核电厂  
Sanmen NPP
- 桃花江核电厂  
Taohuajiang NPP
- 宁德核电厂  
Ningde NPP
- 福清核电厂  
Fuqing NPP
- 广东大亚湾核电厂  
Guangdong Daya Bay NPP
- 广东岭澳核电厂  
Guangdong LingAo NPP
- 台山核电厂  
Taishan NPP
- 阳江核电厂  
Yangjiang NPP
- 防城港红沙核电厂  
Fangchengganghongshe NPP
- 昌江核电厂  
Changjiang NPP

# Requirements for Emergency Governance

# **Nuclear Safety Legislation System**



# Law and Regulations for Nuclear Safety Regulatory



# Nuclear accident emergency preparedness

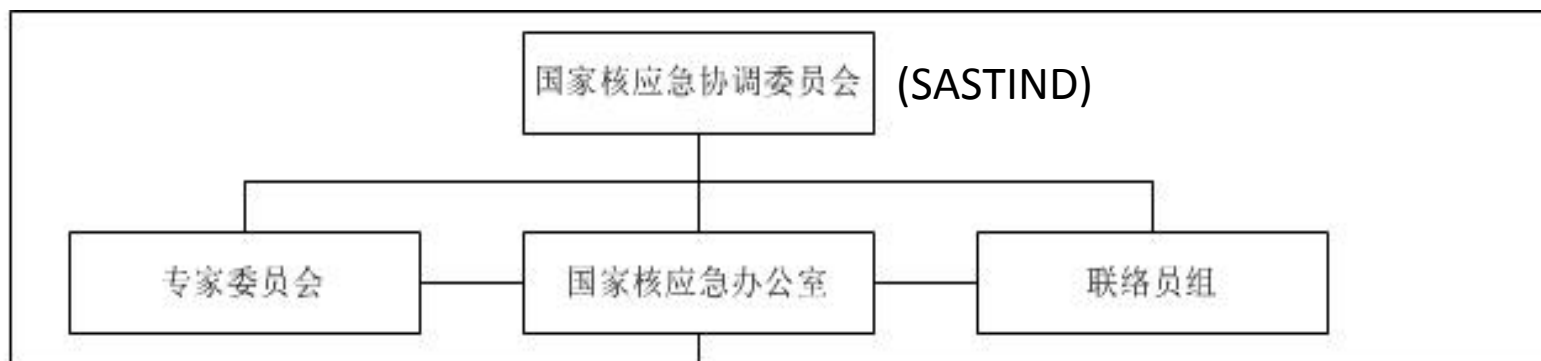
- Establishing emergency organizations
- Preparing emergency response plan
- Emergency response implementing procedures
- Preparing emergency response facilities
- Conducting periodic emergency response training
- Exercises and drill

# **Emergency Organizational System**

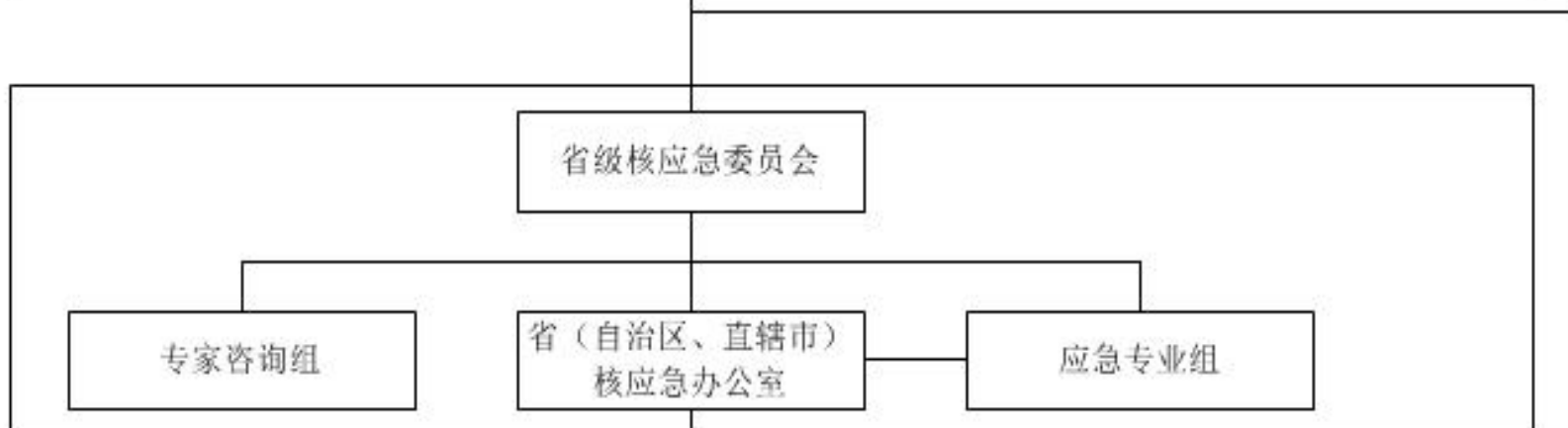
- ONE integral;
- TWO systems: army and local government;
- THREE levels: national, provincial (region, city), nuclear facilities



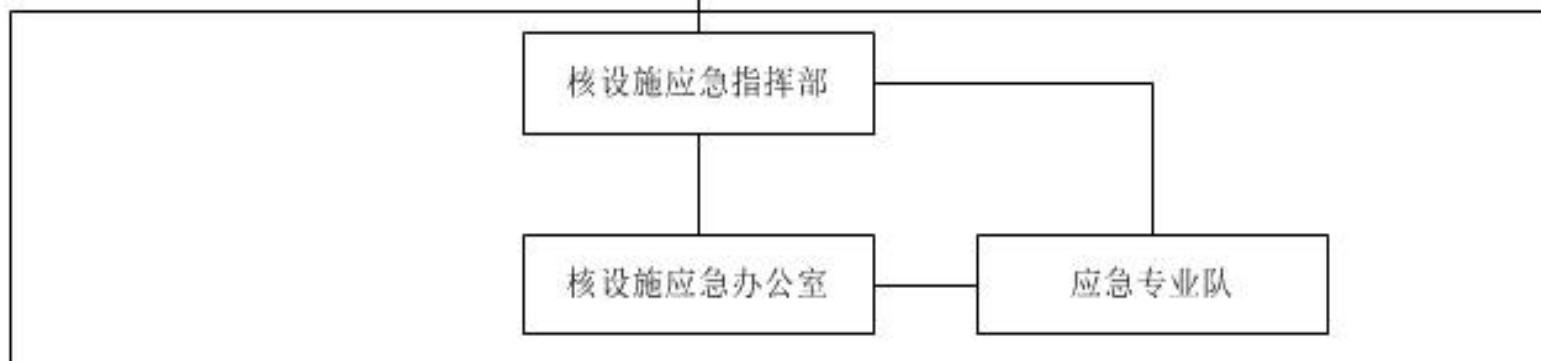
国家核应急组织



省级核应急组织



核电厂核应急组织



# Four scales of emergency situations

- Emergency on Standby
- Plant Emergency
- On-site Emergency
- Off-site Emergency

# Information Dissemination

# Acquaintance for Public with Emergency Preparedness

- With the rapid development of China's nuclear power industry, the attention and participation awareness of the public to nuclear safety is continuously improved.
- Each nuclear-power enterprise and government relevant departments concerned at different levels increase the publicity of nuclear power to the public through different channels.
- Information disclosure system established, and corresponding organization, facilities and resources configured.

慌什么!!!



本店盐已

售完!

谢谢!





# 中华人民共和国环境保护部

Ministry of Environmental Protection of the People's Republic of China

您现在的位置：首页 > 核安全管理司（辐射安全管理司） > 动态信息

## 全国辐射环境自动监测站空气吸收剂量率（2014年6月8日9:00 - 6月9日9:00）

2014-06-09

单位：nGy/h

地点	测值范围	平均值	参考本底范围 (当地原野)	结论
北京市	76.0-104.0	79.5	60.2 -119.9	正常水平
哈尔滨市	73.2-74.3	73.7	57.6-117.1	正常水平
长春市	72.5-78.1	74.5	70.8-147.4	正常水平
沈阳市	84.5-89.9	86.0	61.6-91.2	正常水平
济南市	83.4-84.7	84.1	65.0-110.4	正常水平
南京市	76.0-77.4	76.7	64.9-102.1	正常水平
上海市	90.4-91.3	90.8	54.9-108.2	正常水平
杭州市	106.7-108.6	107.5	56.8-148.2	正常水平
福州市	111.0-112.5	111.8	59.0-184.8	正常水平
广州市			69.3 -266.9	正常水平



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## 我国运行核电站周围环境空气吸收剂量率（2014年6月7日9:00 - 6月8日9:00）

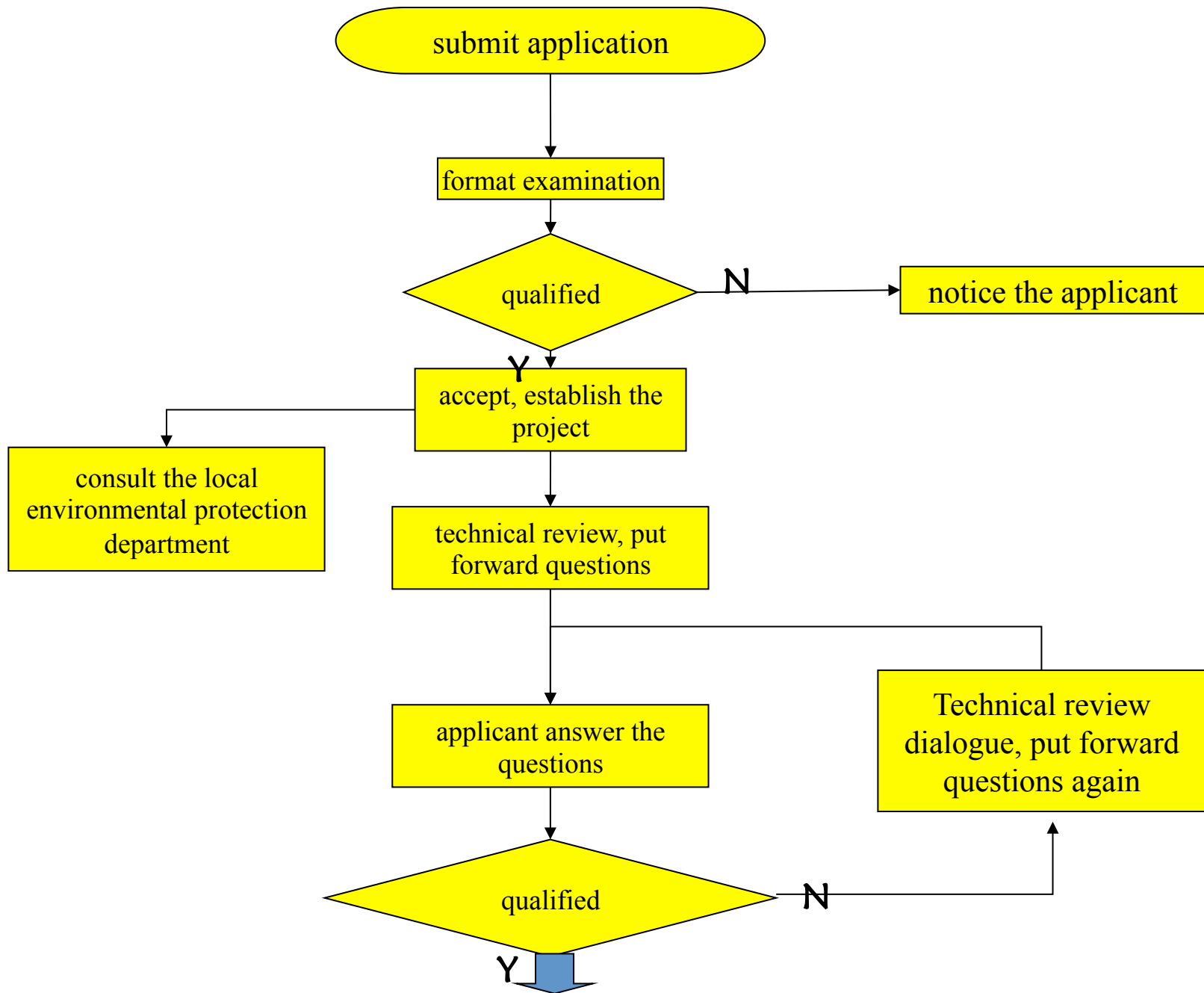
2014-06-08

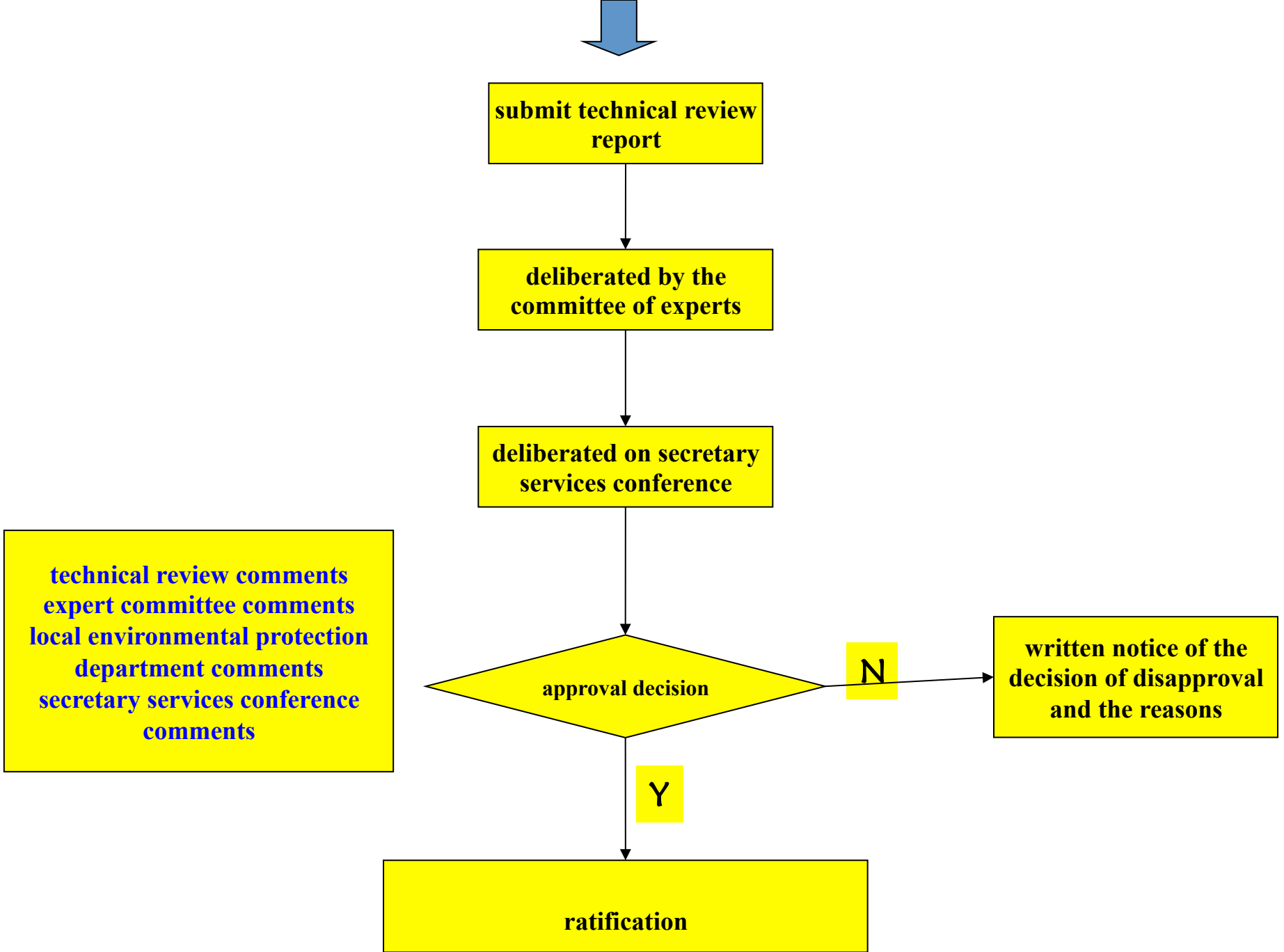
单位：nGy/h

核电站	点 位	测 值 范 围	平 均 值	运行前本底范围 (当地原野)	结 论
秦 山 核 电 基 地	秦山山顶	97.3-99.4	98.0	70.4 - 123.8	正常水平
	夏家湾	101.6-103.2	102.3	70.4 - 123.8	正常水平
	秦山镇	105.1-106.8	105.7	70.4 - 123.8	正常水平
	二期码头	90.9-93.9	92.6	70.4 - 123.8	正常水平
	秦联	103.3-105.2	104.0	70.4 - 123.8	正常水平
	杨柳村东	104.4-107.5	105.9	70.4 - 123.8	正常水平
	杨柳村	105.6-107.3	106.1	70.4 - 123.8	正常水平
	鸽山	88.1-92.5	90.3	70.4 - 123.8	正常水平
	武原镇	112.5-113.9	113.2	70.4 - 123.8	正常水平

# Reviewing Approach for Emergency Plan

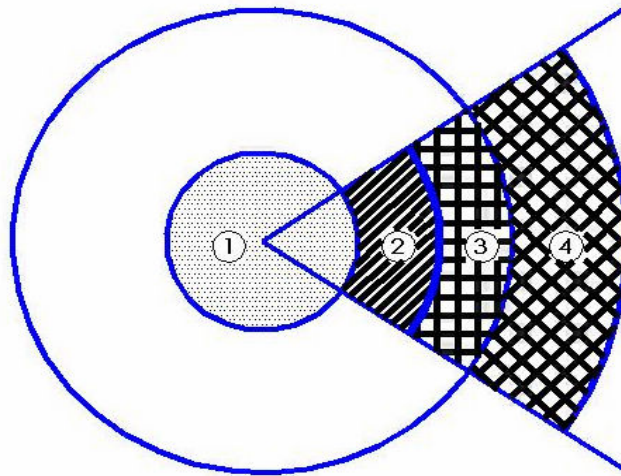






<b>Emergency Planning Zone</b>		<b>Main Protection Measures</b>	<b>Daya Bay NPPs</b>	<b>Qinshan NPPs</b>
<b>Plume Emergency Planning Zone</b>	<b>Inner zone</b>	Hidden, evacuate, taking iodine	<b>0—5km</b>	<b>0—3km</b>
	<b>Outer zone</b>	Hidden, taking iodine	<b>5—10km</b>	<b>3—7km</b>
<b>Ingestion Emergency Planning Zone</b>		Food and water control	<b>0—50km</b>	<b>0—30km</b>

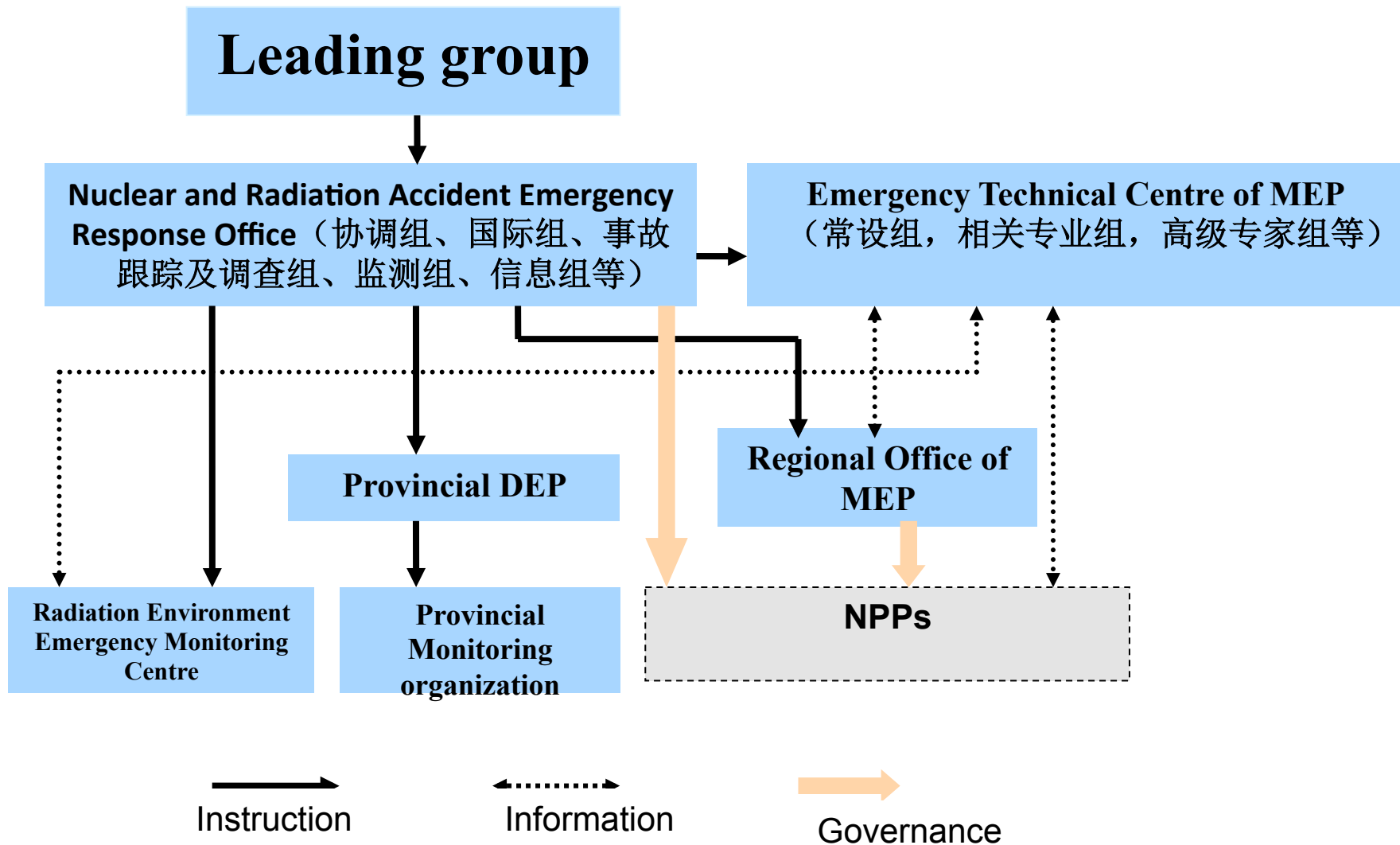
**The emergency planning zone is corresponding emergency preparedness for nuclear facilities, the characteristics of accident analysis and the specific local conditions of the region. Once the real accident happened, it should be according to the actual situation, to determine the corresponding response action.**



# **Exercises and Drill for Emergency Preparedness**

	<b>Single Exercise</b>	<b>Comprehensive Exercise</b>	<b>Joint Drill</b>
<b>NPP</b>	<p><b>Once one year at least.</b></p> <p><b>The more exercises on communication and information delivering system.</b></p>	<b>Once two years</b>	<ul style="list-style-type: none"> <li><b>●Once before the first loading</b></li> <li><b>●Once five years during operation</b></li> </ul>

# Emergency Response of MEP













**Accident Analysis**



**Accident Impact  
Assessment**

# **International Approach for Nuclear Accidents Emergency**

- Convention on Early Notification of a Nuclear Accident
- Convention on Assistance in the case of Nuclear Accident or Radiation Emergency

- “Management Rules of Emergency Crossing the Boundary for Radioactive influence due to Nuclear Accidents” was issued by the CAEA in April, 2002
- China shall carry out obligations in accordance with the conventions
- and take corresponding emergency response actions in case of radiological impact of nuclear accidents trans-boundary.

In case of nuclear accidents had resulted in impact trans-boundary, the National Nuclear Accident Emergency Response Office shall collect the accidental information and notify it directly to or via IAEA to those countries or regions which are or may be involved.

The multilateral and the bilateral international cooperation may promote the personnel skill and information exchange, and learn the experience and lessons. Therefore, the governance level of nuclear emergency in China can be enhanced.



# News

- **Agreement for Emergency Mutual Rescue Cooperation Framework Between the Nuclear Groups of Nuclear Power.( May 5,2014)**
- NPP Emergency Rescue Teams have been set up by China General Nuclear Power Group (CGN) and China National Nuclear Corporation(CNNC) .

Thanks