



国家核安全局

National Nuclear Safety Administration

The Establishment of Nuclear Safety Culture for Equipment Vendors in China

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NNSA/CHINA



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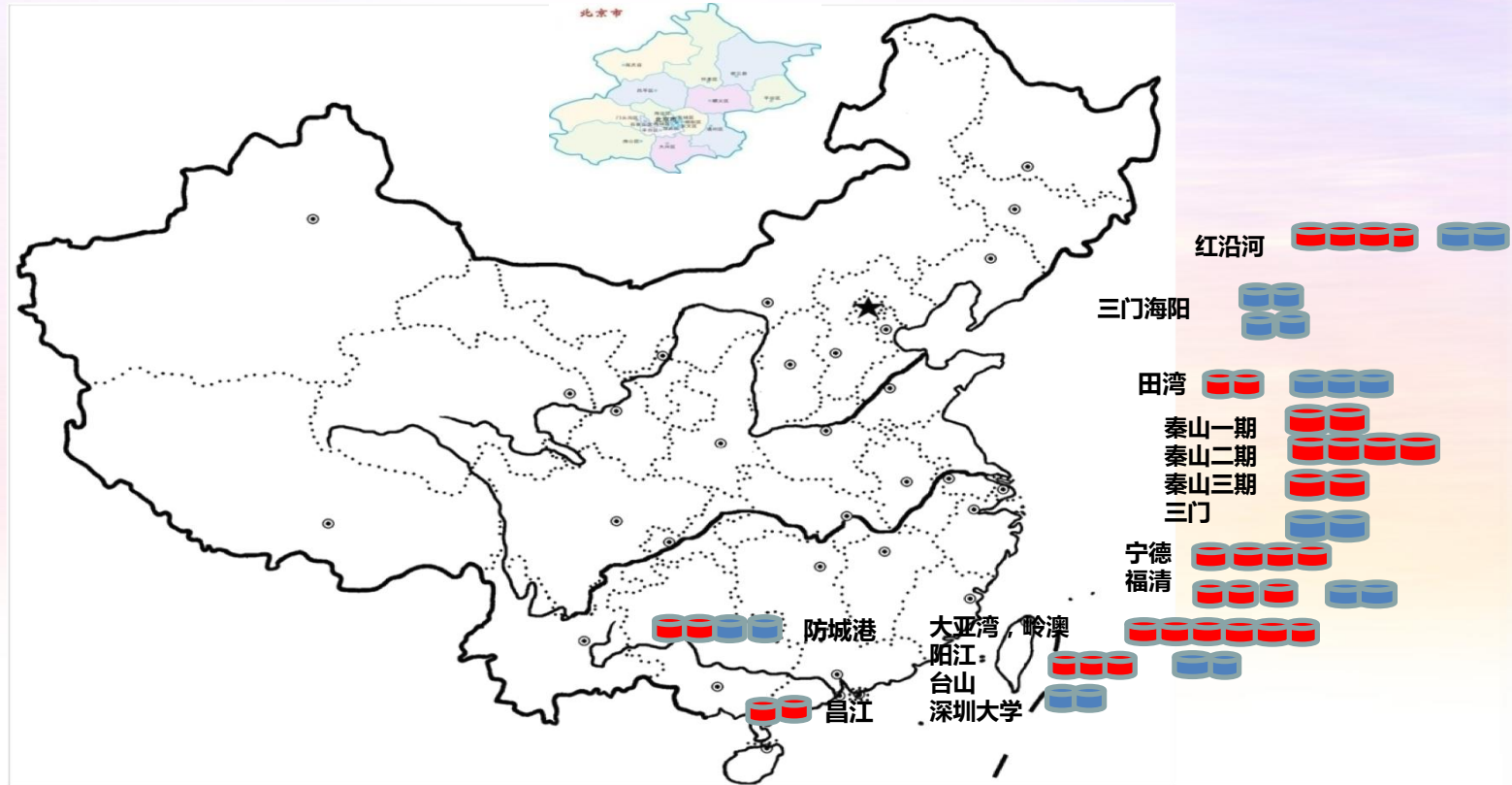
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Further Prospect



1. Background

Nowadays, there are 43 nuclear power units in operation and 13 units under construction in China.



1. Background



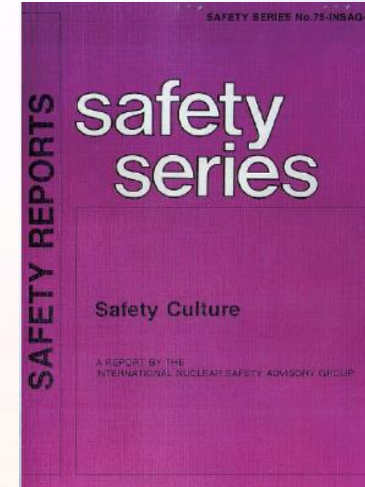
The AP1000 global first unit, the China Sanmen NPP unit 1, was connected to the grid successfully on June 30th, 2018. The Haiyang NPP unit 1 was connected to the grid on August 17th.

The EPR global first unit, the China Taishan NPP unit 1, was connected to the grid on June 29th after 9 years construction.

1. Background

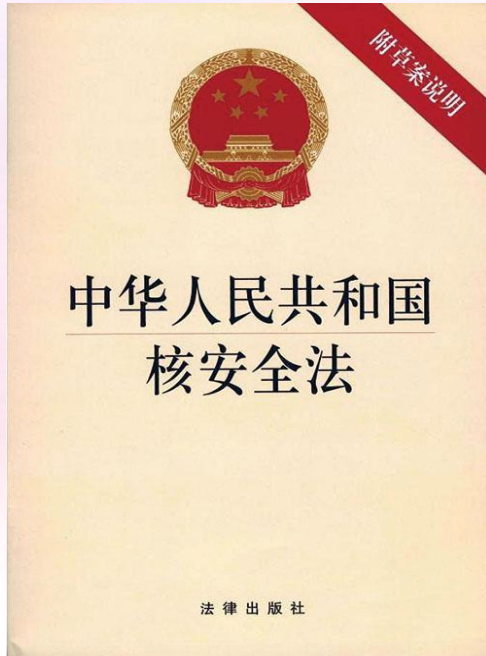
NNSA has always attached high importance on building a positive nuclear safety culture.

We actively cultivated a nuclear safety culture that is in line with the international advanced practices and China's national reality after IAEA introduced the concept of nuclear safety culture.



On the 30th anniversary conference of NNSA, we concluded that the acknowledgement of nuclear safety culture in China is one of 10 achievements.

1. Background



On Jan 1st, 2018, China issued the Act of the People's Republic of China on Nuclear Safety to strengthen nuclear regulation.

The Licensees and related equipment suppliers, construction contractors, service suppliers shall develop and establish nuclear safety culture positively according to the law.

1. Background

We advocate the basic principle of “**safety first, quality first**”.

Implement the nuclear security view of “**Rationality, Coordinative and Common Progress**” .

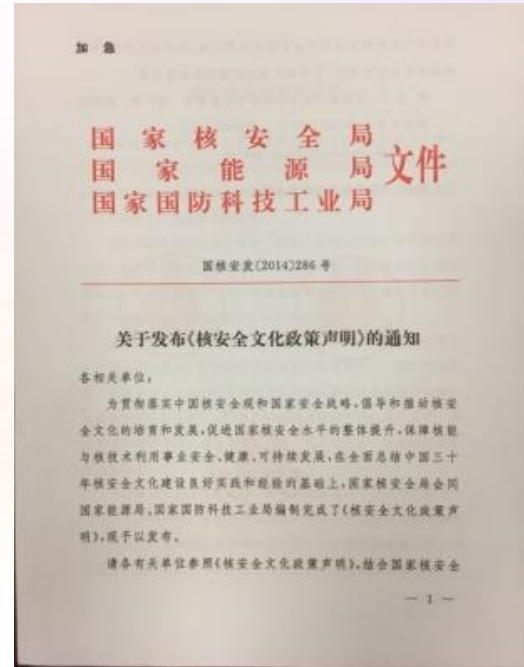
Keep on the spirit of “**strict, careful, cautious and realistic**”.



1. Background

《The policy of nuclear safety culture》 was issued by NNSA, NEA and CAEA together in December of 2014.

Last year, 《The Features of nuclear safety culture》 was published. It introduced 8 features, in order to push forward nuclear safety culture construction.



2.Main Actions of NNSA

1.From 2014 to 2015, NNSA conducted a year-long promotion of nuclear safety culture designed to improve the nuclear safety culture level of the equipment industry .

- Compiled specific manuals on nuclear safety culture and regulations.
- Targeted at eliminating the **fraudulent behaviours** and **illegal operations**.
- Covered **all the equipment licensees(200)** and **qualified persons(20000)**.



2.Main Actions of NNSA

Currently, the major problem in the Chinese nuclear equipment manufacturing industry is related to human factors.

In order to solve this issue, we took various actions to advanced the development of a positive nuclear safety culture in nuclear equipment vendors, utilizing the outcomes of **MDEP/VICWG** and the feedbacks from Korea **CFSI** issues.

2.Main Actions of NNSA

2.In the latter half of 2016, we conducted a “Risk Screening” and“look back” action to recheck the progress of the continuous building of nuclear safety culture and consolidate previous results in the nuclear equipment area.

3. From July to September 2017, NNSA carried out a comprehensive inspection on nuclear safety for 23 equipment vendors. Nuclear safety culture was one of the key evaluation points.

2.Main Actions of NNSA

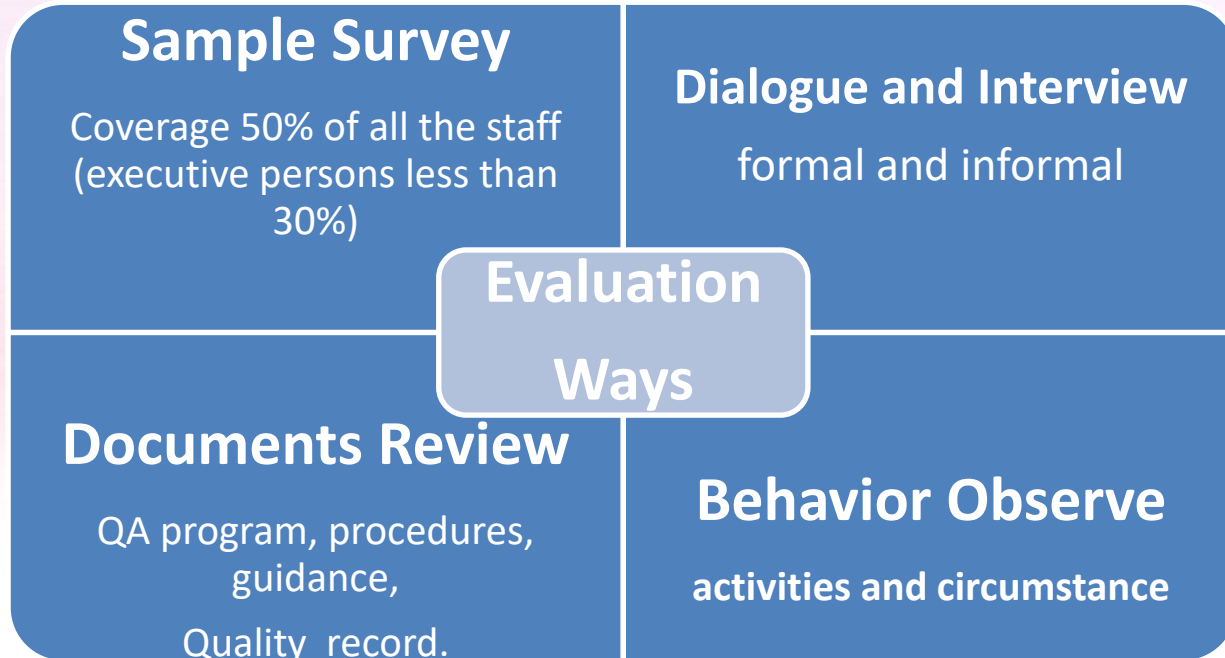
4. Took the nuclear safety culture as one of the most significant elements in supervision and inspection, NNSA carried out evaluations on nuclear safety culture levels for some crucial equipment vendors in daily surveillance.

**Evaluate
contents**



1. Policy levels: concept and commitment.
2. Management levels: good example with correct attitude toward safety.
3. All individual's indispensable role in safety and personally responsible.
4. Organizational and constant learning.
5. Complete and effective management system .
6. Proper working environment is created.
7. Mechanism of questioning, reporting and experience feedback on safety issues.
8. Humanous public relationship.

2.Main Actions of NNSA



2.Main Actions of NNSA

Nuclear culture levels and building advice.

Test Scores	Nuclear culture levels	Advice
$A \leq 60$	Disorderly management level	Rectification and safety culture construction measures shall be taken immediately.
$60 < B \leq 75$	Passive constraint level	Positively construct safety culture
$75 < C \leq 90$	Active management level	Steadily promote and create the mechanism to encourage all staff to be involved
$D > 90$	Self-control promotion level	Keep and carry forward the safety culture

2.Main Actions of NNSA

东方电气股份有限公司文件

东股司核〔2017〕3号

关于发布《东方电气核安全文化政策声明》的通知

股份公司各企业、各单位：

为贯彻执行国家核安全局、国家能源局和国防科工局联合发布的《核安全文化政策声明》，以及国家核安全局关于推进核安全文化建设的相关要求，同时，结合东方电气股份有限公司核安全文化建设核培育的需要，核电事业部组织编制了《东方电气核安全文化政策声明》，现予以发布。

特此通知。

5. In order to enhance equipment licensees' nuclear safety culture level, we push equipment vendors to publish their own enterprise's nuclear safety culture policies and objective, organized quality assurance leaders' test, compiled regulation manual for vendor legal representative.



2.Main Actions of NNSA

6. Hold nationwide experience exchange conference, communicate nuclear safety culture experience, feedbacks on lessons learned.

Organised 10 forums according to the equipment catalogues to enhance the effective Of experience exchange .



2.Main Actions of NNSA

7. Between 2014 and 2018, we took enforcement action or sanctioned more than 48 equipment vendors who didn't abide by the laws and regulations.

2014-2017 年核安全设备持证单位行政处罚情况汇总

(共计 34 家单位违规)

序号	单位名称	违规问题	违反条款	适用罚则	处罚情况	处罚时间	来源
一、违规操作							
1	大连帝国屏蔽电泵有限公司	在阳江 5、6 号机组核 3 级泵泵终配管焊接过程中违规补焊；在红沿河 5、6 号机组核 3 级屏蔽泵设计活动前未备案。	第八条 第二十三条	第四十八条 第五十一条	停止设备设计、制造活动，2017 年 2 月 28 日前改正，罚款 20 万元。	2017-02	监造
2	中国核工业二三建设有限公司	泰山分公司在福清 5、6 号机组碳钢管焊管道制造过程中私自违规返修焊口。	第八条	第四十八条	停止违法行为，2017 年 1 月 31 日前改正，罚款 20 万元。	2017-01	举报
3	东方电气集团东方锅炉股份有限公司	检验人员违反无损检验规程、误用验收标准。	第二十五条	第五十四条	通报批评，吊销人员证书。	2017-01	华北站

3. Further Prospect

1. Formulate a specific nuclear safety culture inspection procedure to standardize the content of the inspection of equipment vendors.
2. Develop guidance on nuclear safety culture construction to guide equipment vendors' nuclear safety culture activities.



3. Further Prospect

3. Complete the development of online experience feedback systems to streamline experience feedback work processes and raise efficiency.
4. Advance internal capacity building, enhance the nuclear safety culture levels of NNSA's inspectors.



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信息系统



注册核安全工程师
考试系统



全国核技术利用
辐射安全申报系统



国家核技术利用
辐射安全监管系统



国家核安全局

National Nuclear Safety Administration

Thanks for your attention!

