JSC “Atomenergoprom” ‘s Efforts to Establish Physical Protection Corporative Standards in Developing Effective Approaches to Physical Protection of NPPs Under Construction

V.Goltsov, V.Limonayev
Outline:

- Plans to construct new nuclear power-generating units;
- Principles;
- Corporative Standard on PP;
- Special Expertise of PPS Design Chapter – separate chapter of a Design of a new nuclear power-generating unit.
Basis:

- List of nuclear materials that can be in federal ownership exclusively;
- List of Russian legal entities that can own nuclear materials and nuclear facilities;
- List of nuclear sites, privatization of which is prohibited;
- List of organizations of the State Atomic Energy Corporation “Rosatom” and JSC “Atomenergoprom”.

Institutional basis is created to guarantee maintenance of the State governance and integrity of the Russian atomic branch.
Main Structure Elements:

JSC “Atomenergoprom” (Holding)

Department on Security and Information Protection

31 nuclear sites which are in the sphere of JSC influence
Principles:

• security culture;
• priority of preventive approach;
• adequacy of measures on physical protection to design basis threat;
• adaptability;
• appropriate sufficiency;
• responsibility of the license holders;
• graded approach;
• defence in depth;
• contingency plans;
• confidentiality.
Russia is now constructing: 7 units - at home; 4 units – abroad.
Norms and Standards:

The Norms have general character

- **International norms and obligations of RF**
- **Federal legislation**
- **Federal rules and regulations**
- **Corporative standards on PP**

Standard – clarifies, systematizes, unifies, optimizes, ...
Corporative Standard on PP:

Investment phase

NPP Design

NPP Pre-Design Stage

Task Order for NPP Design

Task Order for PPS Design

NPP designing

PPS designing

NPP Design

NPP PPS Design Chapter

Special Expertise

State NPP Design Expertise

Nuclear Power Plant Design Stage

Corporative standard

Choice of specialized organization

Categorization

Choice of design basis threat

Vulnerability analysis

Designing PPS

Evaluation of PPS effectiveness

Choice of specialized organization

Corporative Standard on PP:
Corporative Standard on PP:

- **Investor**
- **Customer**
- **Prime Contractor**
- **Contractors (specialized organizations)**

**Corporative standard on PP obligatory procedures**

- Categorization
- Choice of design basis threat
- Vulnerability analysis
- Designing PPS
- Evaluation of PPS effectiveness
- Choice of specialized organizations

**Phase I**
- Establish PPS Objectives

**Phase II**
- PPS Design

**Phase III**
- Evaluation of PPS effectiveness

**Assessment**

**Completion of PPS Designing**
Corporative Standard on PP:

Investment phase

Nuclear Power Plant Design Stage
- Task Order for NPP Design
- NPP Designing
- NPP Design
- Special Expertise
- State NPP Design Expertise

Corporative standard
- Choice of specialized organization
- Categorization
- Choice of design basis threat
- Vulnerability analysis
- Designing PPS
- Evaluation of PPS effectiveness

NPP Pre-Design Stage
- Task Order for PPS Design
- PPS Designing
- NPP PPS Design Chapter

NPP Construction Stage
Special Expertise of PPS Design Chapter

Compliance with:
- requirements of the Russian regulatory basis;
- requirements of Corporative standard on PP.

Assessment of:
- technical and financial characteristics of PPS Design chapter

Definition of:
- necessary adjustments

Independent Specialized Organizations:
- competitive selection;
- special licences to expertise design and technological documentation on PP
Summary:

- Plans to construct new nuclear power-generating units;
- Principles;
- Corporative standard on PP;
- Special Expertise of PPS Design Chapter – separate chapter of a Design of a new nuclear power energy-generating unit.
Thank You For Your Attention!