

Panel 2-1



**DESIGN
OF THE REGIONAL TRAINING
CENTER
FOR MATERIAL PROTECTION,
CONTROL AND ACCOUNTING**

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PURPOSE OF TRAINING CENTER FOR MATERIAL PROTECTION, CONTROL AND ACCOUNTING



- ❑ Training and retraining of specialists on Physical Protection of Nuclear Materials and Nuclear Facilities for the Nuclear Objects in the Republic of Kazakhstan and Foreign States.
- ❑ Training and retraining of experts on Material Control and Accounting of Nuclear Facilities in the Republic of Kazakhstan and Foreign States.
- ❑ Training and retraining of specialists for the State Administration Structures of the Republic of Kazakhstan, performing operations related to Material Protection, Control and Accounting.
- ❑ Training and retraining of the Response Force specialists.

THE GOALS OF THE TRAINING CENTER FOR THE MPC&A SPECIALISTS TRAINING AND RETRAINING



- ❑ Studying the Physical Protection, access control and the intra-facility security fundamentals of nuclear site and critical public facilities, Republic of Kazakhstan infrastructure objects, Material Control and Accounting.
- ❑ Studying the design of Physical Protection Equipment and Engineering Structures (henceforth PPE and ES) for nuclear site and critical public facilities.
- ❑ Studying the methods of response actions development for emergency situations on the protected object.
- ❑ Studying the advanced practices in measurement and evaluation of measurement, in storage systems.
- ❑ Provide knowledge and practical skills for the implementation and organization of PPE and ES operation.
- ❑ Studying the basic approaches and principles of vulnerability assessment and evaluation effectiveness of the Nuclear Site Physical Protection Systems.
- ❑ Studying the methodology of inspection of the Nuclear Facilities Physical Protection Systems.
- ❑ Studying the Nuclear Security Culture basics.
- ❑ Studying the organization of the facility security services (secure services).

JUSTIFICATION FOR THE TRAINING CENTER ESTABLISHMENT



The establishing Training Center will allow to:

Guarantee consistently high level of MPC&A specialists professional training, accordance to international standards, based on effective use of the teachers' and trainers' experience, set up training facilities, taking into account the development of science, engineering and technology in the global scientific and educational space

Provide MPC&A training in accordance with the recommendations of the International Atomic Energy Agency (IAEA), under the single governing requirement of Kazakhstan with international experience in this field

Create in the Republic of Kazakhstan its own staff of teachers and trainers that could conduct the training at international standards

TRAINING CENTER MANAGEMENT



The authority of KAEC RK MINT for the Academic Management of the Training Center

- Define the priority activities of the Training Centre
- Check the conditions of the license for MPC&A training in accordance with the law
- Request and receive without any restrictions the information and documents of the Training Center
- Organize cooperation with authorities of other states and international organizations, government agencies and departments of the Republic of Kazakhstan on the issues of training at the MPC&A Training center
- Organize coordination with state authorities of the Republic of Kazakhstan on the Training Center activities
- Make suggestions for amending the Training Center curriculum
- Participate in organization and conduct the training course
- Certify the Training Center personnel in accordance with the Regulations permitting the staff to carry out work in the field of atomic energy

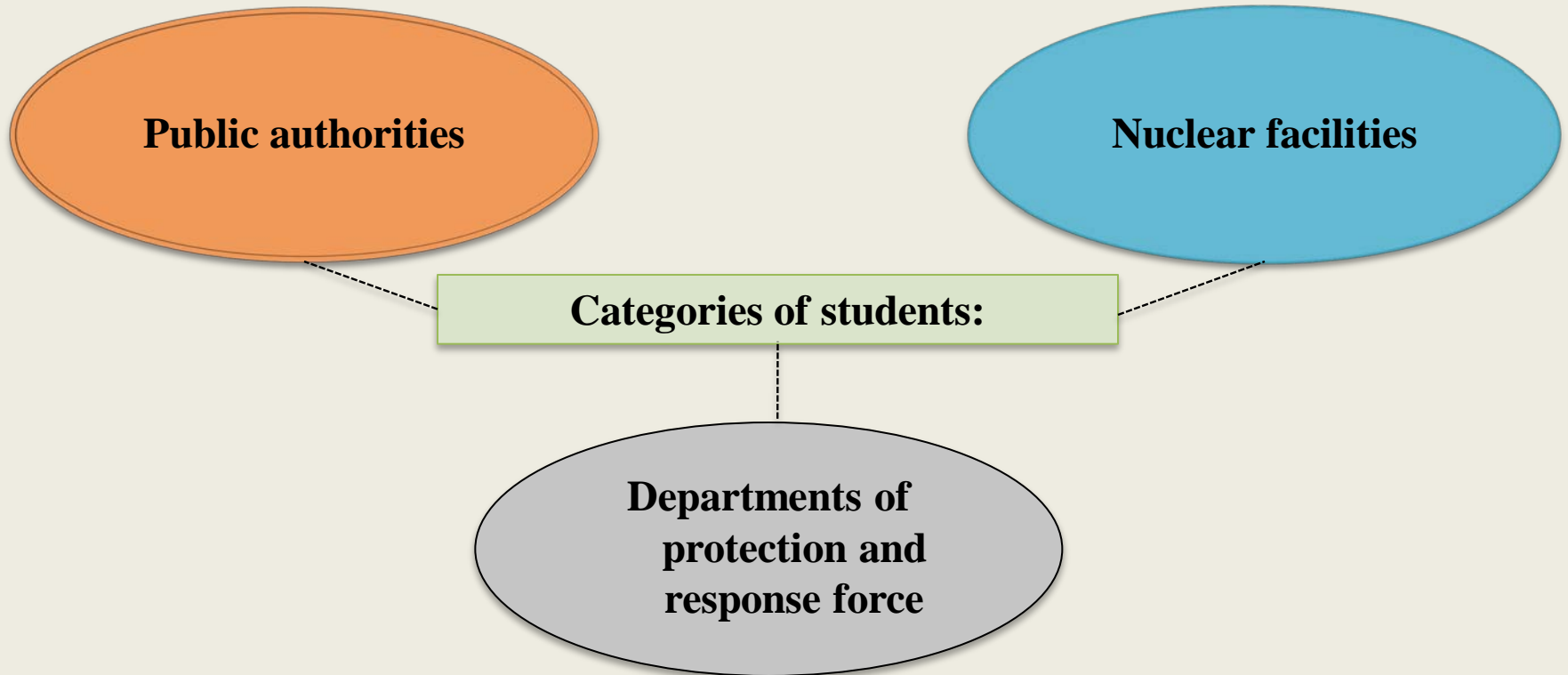
TRAINING CENTER MANAGEMENT



The authority of NNC RK MINT for the Academic Management of the Training Center

- ❑ Carry out the Department inspections
- ❑ Request and receive without any restrictions the information and documents of the Training Center
- ❑ Organize cooperation with authorities of other states and international organizations, government agencies and departments of the Republic of Kazakhstan on the issues of training at the MPC&A Training center
- ❑ Organize coordination with state authorities of the Republic of Kazakhstan on the Training Center activities
- ❑ Make suggestions for amending the Training Center curriculum
- ❑ Participate in organization and conduct the training course

TRAINING PROCESS OF TRAINING CENTER



BASIC AREAS OF TRAINING



Basic Training Areas of the Training Center

Physical protection of nuclear materials and nuclear facilities

Accounting and Control of Nuclear Materials

Non proliferation

TOPICS FOR PHYSICAL PROTECTION TRAINING



- PP basics
- PP organization on the nuclear site
- PPS design
- PPS operation
- PPS inspecting
- PPS operational testing
- Nuclear Security Culture
- Carrying out of the vulnerability assessment and evaluation effectiveness of the PPS
- Privacy
- Physical protection of nuclear materials transportation
- Detection of radioactive and nuclear materials

TOPICS FOR MATERIAL CONTROL AND ACCOUNTING TRAINING



- ❑ General MC&A framework, State System of Accounting and Control (SSAC) IAEA (for executives)
- ❑ Development of MC&A regulatory documents
- ❑ Organization of the MC&A system at the facility level
- ❑ Organization and basis of security at nuclear materials transportation
- ❑ The concept of NM automated accounting
- ❑ Non-destructive measurements of nuclear materials, equipment, techniques
- ❑ The system of containment and surveillance
- ❑ IAEA: rights and responsibilities of inspectors, types of inspections, cooperation with IAEA, organization of inspectors receiving
- ❑ International agreements and their influence at the facility level, the types of Warranties
- ❑ Reporting to a government agency under the IAEA
- ❑ Declaration in the framework of the Additional Protocol, additional access, integrated guarantees

TOPICS FOR RESPONSE FORCE TRAINING



- ❑ Fundamentals of PP (for the officers)
- ❑ Organization of response and neutralization
- ❑ PPS Central Alarm Station Operators Activities Basics
- ❑ Ensuring the physical protection of nuclear materials in transportation
- ❑ Ensuring the detection of radioactive and nuclear materials

ELEMENTS OF THE TRAINING CENTER



Training Classes

- Training classroom for internal systems of physical protection (PPS) training
- Training classroom for internal and external systems of physical protection training
- Training classroom for Material Control and Accounting
- Laboratory for all aspects of responsibilities and the types of MC&A work, including a computerized accounting system

Training Objects

- Training area in the protected zone.
- Training center alarm station
- Training Badge Office
- Training Access control point for pedestrians
- Training Vehicle Control point for vehicles
- Tactical and Firearms Training areas

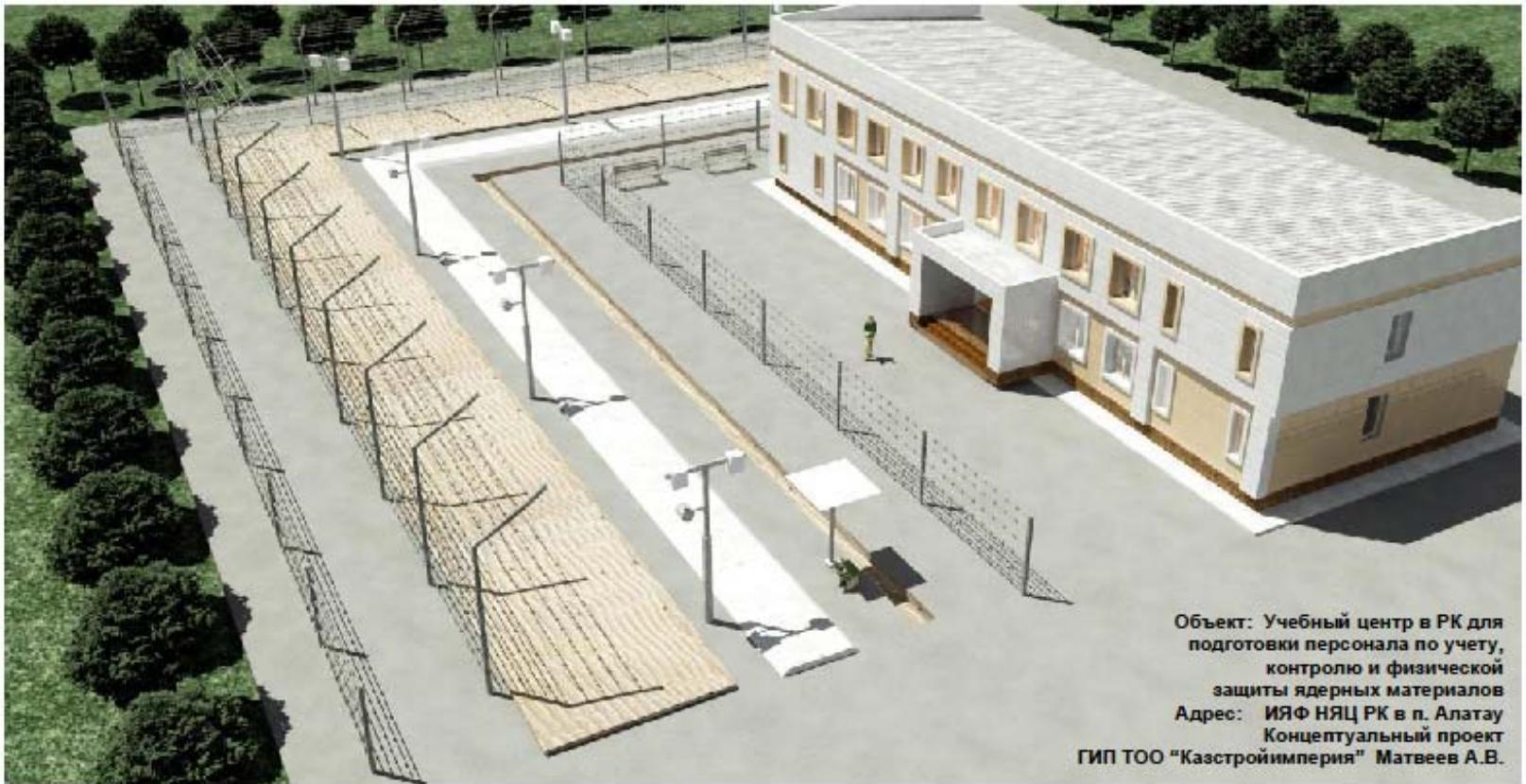
Office and technical premises

- Office for Head of the Training Center
- Office Space for the Training Center Instructors
- Office Space for Engineering Group personnel
- Office Space for Private Instructors
- Technical room for the Training Center equipment maintenance
- Technical room housing the computer network equipment

PLANNING OPTIONS FOR THE TRAINING CENTER PLACEMENT

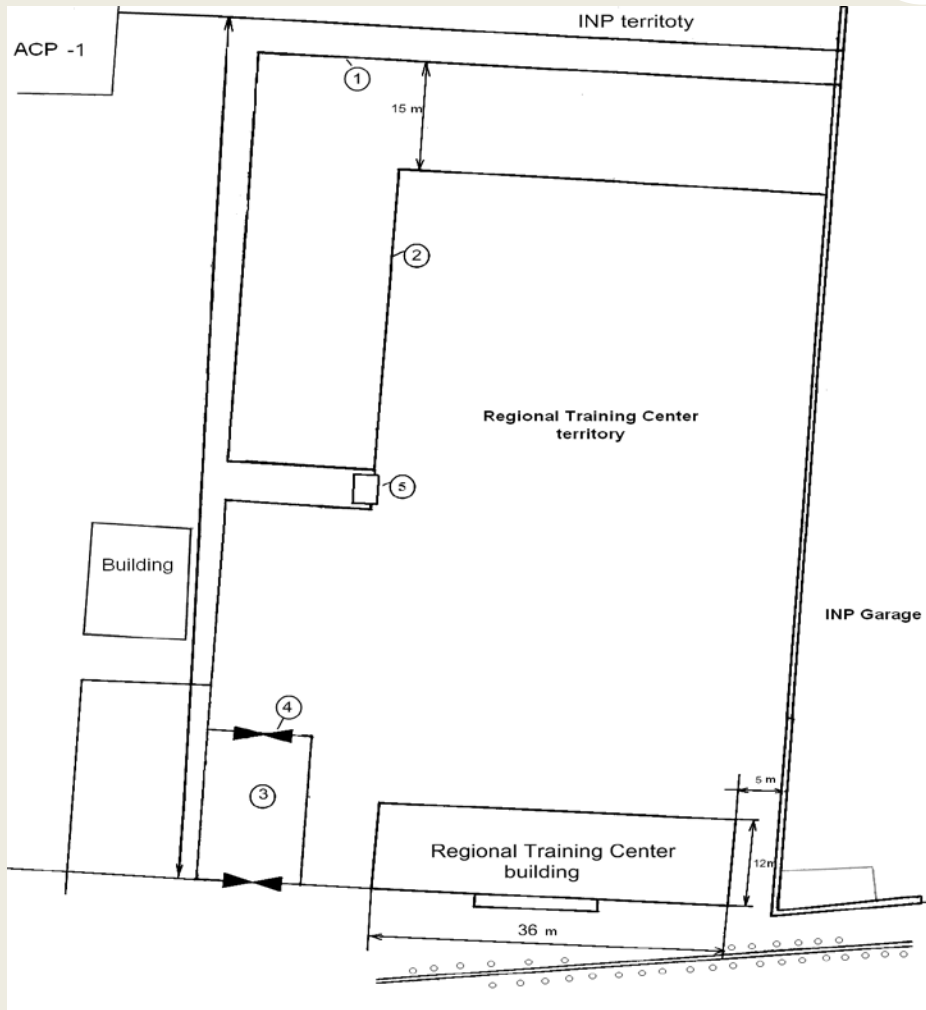


*Placement in a newly constructed building in the sanitary protection territory of INP
- as the main option*



Объект: Учебный центр в РК для подготовки персонала по учету, контролю и физической защите ядерных материалов
Адрес: ИЯФ НЯЦ РК в п. Алатау
Концептуальный проект
ГИП ТОО "Казстройимперия" Матвеев А.В.

GENERAL LAYOUT OF THE TRAINING CENTER FACILITIES



Notation Conventions:

- 1 – basic fence
- 2 – internal fence
- 3 – training vehicle control point for vehicles
- 4 – vehicle gates
- 5 – detached building



- **Thank you for attention**