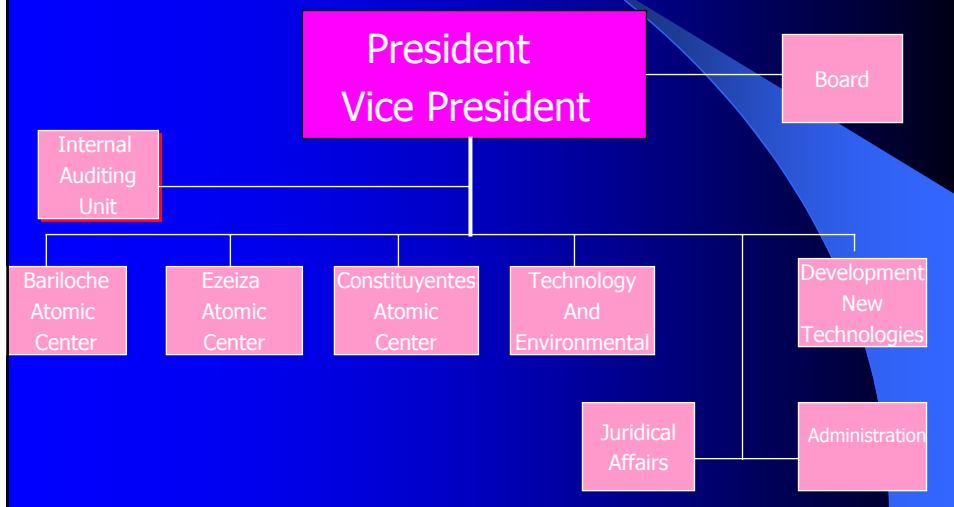


2nd Technical Meeting on the Research Reactor Decommissioning Demonstration Project

October 16-20 Manila, Philippines

Roberto Anasco
National Atomic Energy Commission

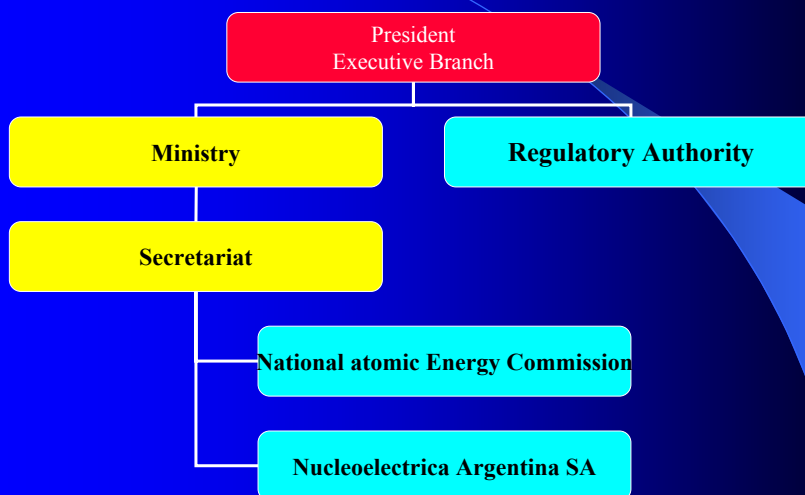
CNEA ORGANIZATION CHART



NUCLEAR POWER REACTORS

| UNIT | TYPE PWR | GRID CONNECTION | STATUS | OPERATOR |
|-----------------|-----------------|--------------------|--------------|------------------------------|
| Atucha I | PHWR 340 Mwe | 1974 | Operation | Nucleoelectrica Argentina |
| Embalse | PHWR 600 Mwe | 1984 | Operation | Nucleoelectrica Argentina |
| AtuchaII | PHWR 692 | ----- | Construction | Nucleoelectrica Argentina |

Organization Chart



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RESEARCH REACTORS AND CRITICAL ASSEMBLIES

| UNIT | TYPE | FUNTIONING | LIFE CYCLE PHASE | OPERATOR |
|------|-----------------------------|------------|------------------|--------------------|
| RA-0 | ^{235}U 20% 1Wt | 1970- | OPERATION | CORDOBA UNIVERSITY |
| RA-1 | ^{235}U 20% 40kwt | 1958- | OPERATION | CNEA |
| RA-2 | ^{235}U 90% 1Wt | 1966-1983 | DISASSEMBLED | ----- |
| RA-3 | ^{235}U 20% 5Mwt | 1967- | OPERATION | CNEA |
| RA-4 | ^{235}U 20% 1Wt | 1971- | OPERATION | ROSARIO UNIVERSITY |
| RA-6 | ^{235}U 90% 0.5 Wt | 1982- | OPERATION | CNEA |
| RA-8 | ^{235}U 3.4% 10 Wt | 1997- | OPERATION | CNEA |

RA-1



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RA-3



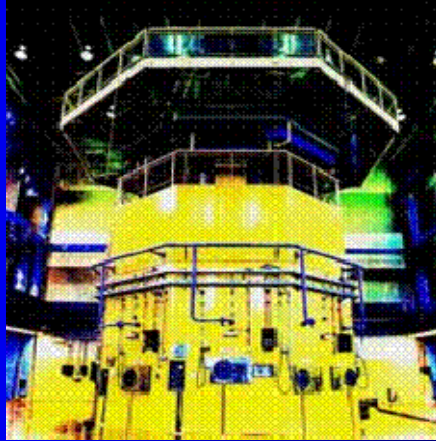
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RA-6



8

RA-6



9

REGULATORY APPROACH ON DECOMMISSIONING OF NUCLEAR INSTALLATIONS

APPLICABLE REGULATIONS TO THE DECOMMISSIONING STAGE:

- Licencing of Relevant Nuclear Installations
- Basic Standard for Radiological Safety
- Decommissioning of Nuclear Power Plants
- Radioactive Waste Management

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NATIONAL ASPECTS OF THE D&D ACTIVITIES

According to chapter I, Art. 2.e of the National Law N° 24804 ruling nuclear activities CNEA “ Is responsible for determining the procedure for decommissioning Nuclear Power Plants and any other relevant radioactive facilities.”

The implementation the Nuclear Law, states that CNEA is responsible for decommissioning of all relevant radioactive facilities in the country, at end of life.

Consequently in May 2000 CNEA created a D&D branch within its Unit of Technology.

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Real Situation:

There is not a Decommissioning plant for any facility

There are not a final repository for LLW and ILW.

The capacity of the Atucha pools are not enough for all the spent fuel till the end of its life.

Many structural components from the NPP's were or must be removed because design problems or ageing.

According with this scenario: the main activities are focused in:

Preliminary planning and radiological characterization f or research reactors.

Characterize structural components ,valves, flanges, etc.

Evaluate the decontamination and the treatment of the liquids generated.

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To accomplish this objective, this branch

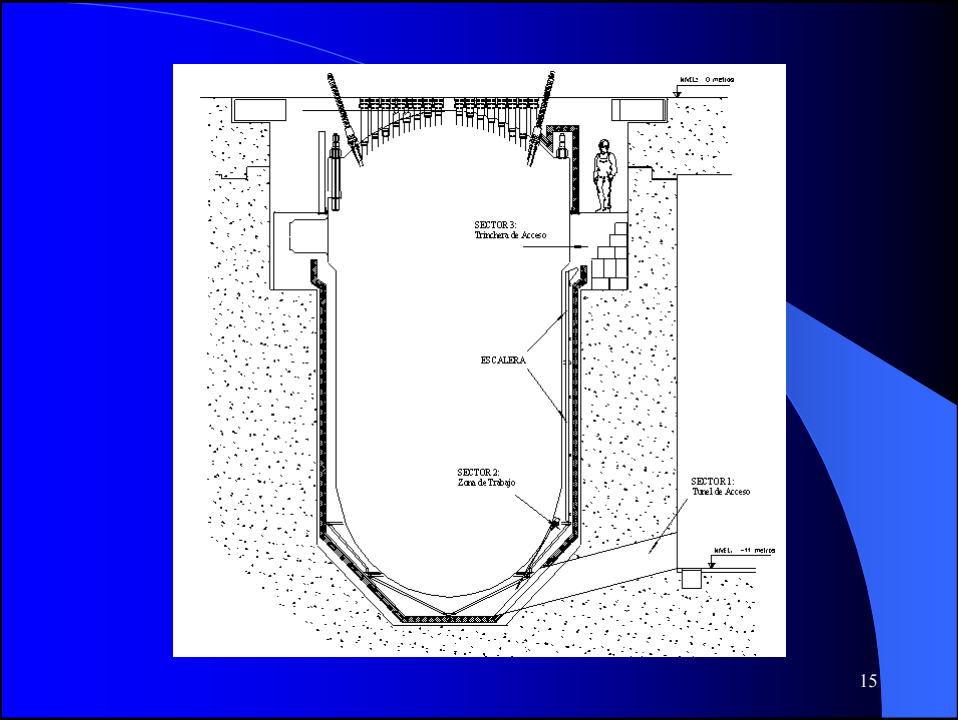
- a) Coordinates the training of personnel and organizes the experience and technical knowledge already existing in CNEA and members of the argentinian nuclear sector.
- b) Coordinates a R&D program on D&D technologies.
- c) Establishes close links with the operators of nuclear facilities, whose participation both in planning and in actual D&D work is considered extremely important.

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Works in progress:

- Characterization, decontamination and disposal of CNA 1 components and equipments like parts of heat exchanger tubes, valves, tanks, component's pumps, filters. **It means some tons.**
- Processing of coolant channels. There are more than sixty channels which must be processed.
- Preliminary planning and radiological characterization of the research reactors.
- Two examples are given:
 - Disassembly of one ladder with high dosis.
 - Treatment of coolant channels.

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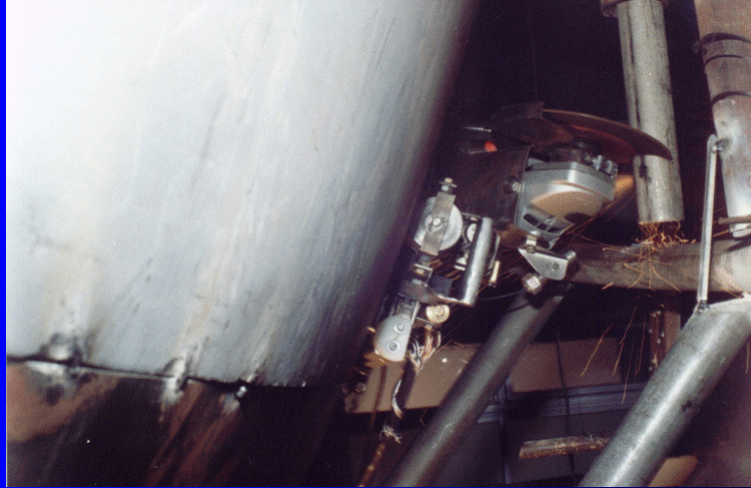


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Testing of Cutting Machine in Mock-Up



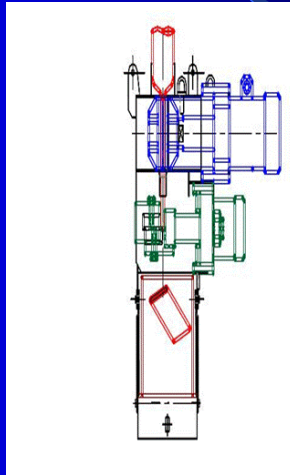
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18

REMOTE UNDERWATER SYSTEM TO PROCESS COOLANT CHANNELS

Description of underwater cutting and crushing machine

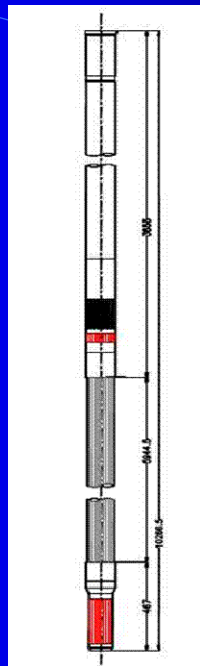


Hidraulic cilinder
Compactor 75 tons

Hidraulic cilinder
Cutter 50 tons

Basket for scrap

19



Stainless Steel

Connector

Zry 4

Nozzle

20



**THANK YOU FOR YOUR
ATTENTION**

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