

# DECOMMISSIONING OF SALASPILS RESEARCH REACTOR IN 2008



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# Introduction

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The research reactor IRT in Salaspils site near the capital of Latvia - Riga was put into operation in September 1961. The research reactor was originally built according to former USSR design as a pool type light water-water reactor with nominal thermal power 2 MW.

# Details on Research Reactor Facility

Country: Latvia	Power: 5 MW after 1974
Research Reactor Name: Salaspils research reactor	Owner: Ministry of Environment
Reactor Type: IRT-5000	Operator: State hazardous wastes management agency
Start of Operation: 26.09. 1961	Regulatory body: Radiation Safety Centre



# Reasons for decommissioning

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- The facility's lifetime was close to the end level;
- The infrastructure remained in Russian Federation ;
- Reconstruction's price was close to the decommissioning price

# Present State of Research Reactor



- In 19 June of 1998 year, the reactor was out of operation ;
- The Order No. 57 of Cabinet of Ministers in October 26, 1999 accepts the option to direct dismantling of SRR up to “green field”;
- The upgrading of initial decommissioning plan was performed in 2003;
- The Government accepted the upgraded concept of decommissioning in November 30,2004

# D&D activities in 2008

- **Main activities were:**
- Upgrades of infrastructure for decommissioning ;
- Spent fuel management ;
- Dismantling , cutting and conditioning of unused reactor's systems;
- Collection and conditioning of “historical” wastes



# Upgrades for decommissioning

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- Upgrade of reactor hall's radiation monitoring system ;
- Upgrade of special ventilation system ;
- Upgrade of reactor hall's crane;
- Upgrade of reactor's heating system;
- Upgrade of radwastes transportation system;
- Upgrade of radioactivity measurement laboratory

# Crane in the reactor's hall



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Vienna, IAEA, 3-7 November, 2008

# Vacuum cleaner in the reactor's hall



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## Spent fuel management

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### Main activities:

- Definition of loading site for wagons;
- Definition of transportation routes;
- Verification of nomenclature;
- Definition technical measures for shipment;
- Measuring of radiation fields;
- Implementation of technical upgrades;
- Preparation of documents for the shipment;
- Implementation of the shipment

## Testing of assemblies

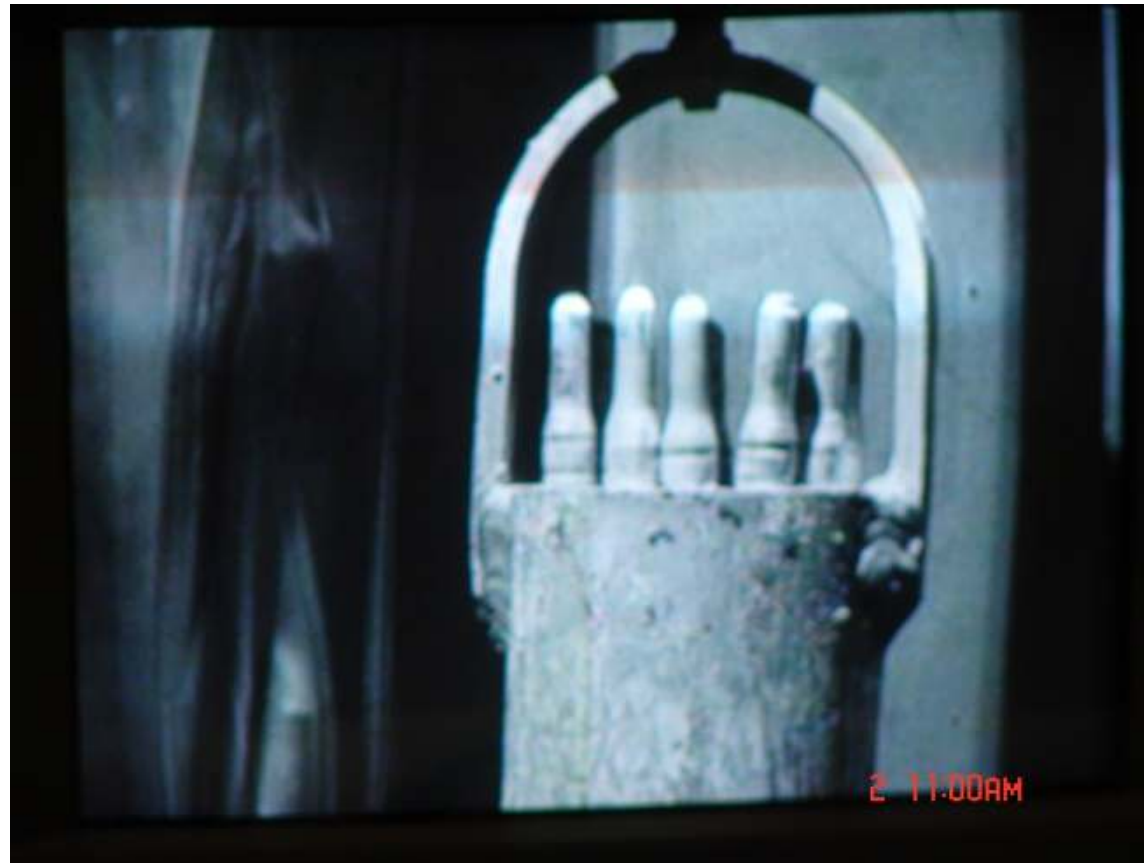


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## Basket with EK-10 central elements



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# Spent nuclear fuel removing telfer



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# Basket removing from container TYK-19



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## Sealing of container with SNF



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# Sealed containers in the reactor's hall



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# Transportation of containers from the reactor's hall



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## Loading of containers in truck



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# Loading of container with SNF in train



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## Dismantling activities in 2008

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- Dismantling of the third cooling system;
- Dismantling of heat exchangers;
- Dismantling of zero reactor's pool;
- Dismantling of unused equipments and facilities.

## Dismantling of heat exchangers in the reactor's hall



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## Dismantled heat exchangers in the reactor's hall



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# Material flux from decommissioning of Salaspils RR

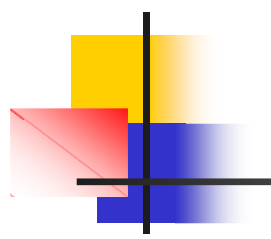
<b>Year</b>	<b>1999</b>	<b>2000</b>	<b>2001/ 2</b>	<b>2003/ 4</b>	<b>2005/ 6</b>	<b>2007/ 8</b>	<b>Total</b>
Metallic scrap for reuse, tons	11	31	71	75	8	36	<b>232</b>
Concrete for disposal, tons	9	64	281	39	13	4	<b>410</b>
Another materials ,tons	3	38	20	14	4	3	<b>82</b>
Conditioned radwastes, tons	2	7	32	14	22	7	<b>84</b>
Conditioned spend sealed sources and wastes ,TBq	6.2	4.6	7.0	0.6	82	2.0	<b>102.4</b>

# Main further priorities

The main priorities for D&D of Salaspils research reactor are following :

- Upgrading of the disposal site “Radons” for disposal of wastes from decommissioning of Salaspils research reactor;
- Preparation of detail dismantling plan of bioshield;
- Final decommissioning of SRR.

# Acknowledgments



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