ASSESSMENT OF OCCUPATIONAL EXPOSURE DURING OUTAGES AT THE NPP DUKOVANY REGULATORY VIEW

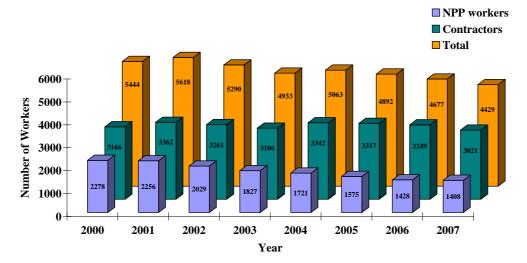
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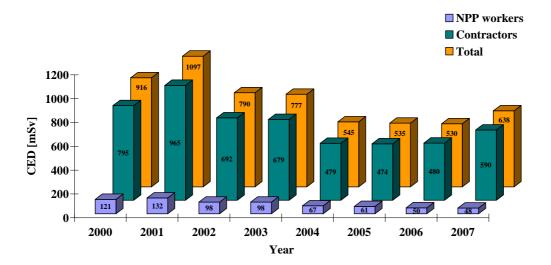
Data

- Presented for four units of the NPP Dukovany
- Obtained from Electronic Personnel Monitoring System
- Doses expressed in mSv

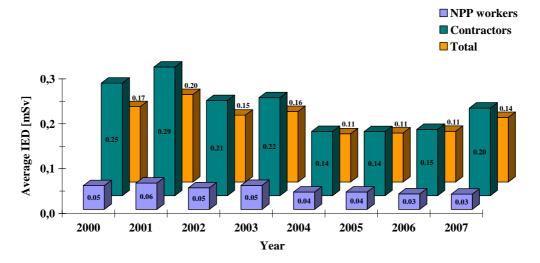
Number of Workers Involved in Outages



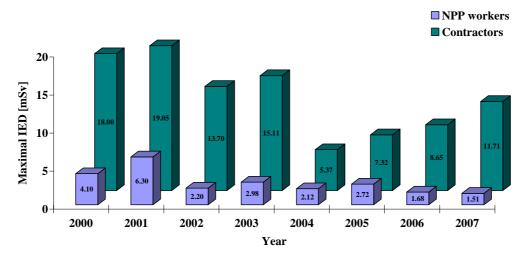
Collective Effective Doses (CED) in Workers Involved in Outages



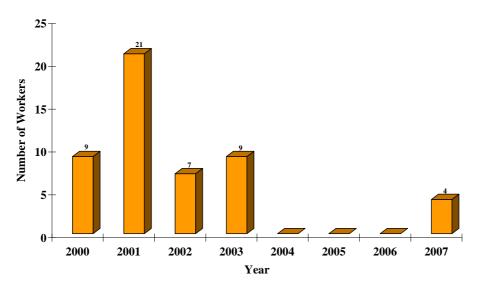
Average Individual Effective Doses (IED) in Workers Involved in Outages

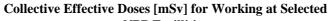


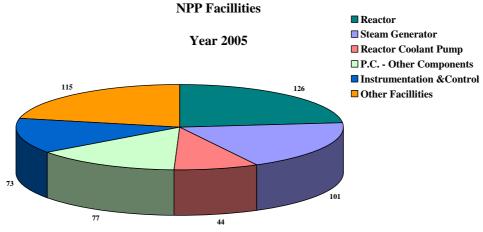
Maximal Individual Effective Doses (IED) in Workers Involved in Outages



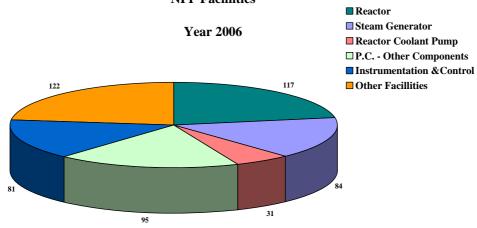
Number of Workers with a Maximal Individual Effective $Dose > 10 \; mSv \label{eq:Dose}$



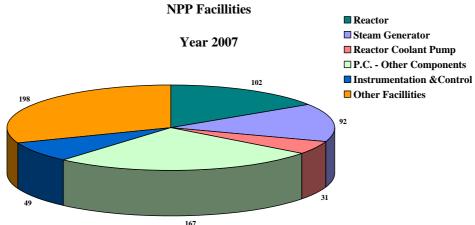




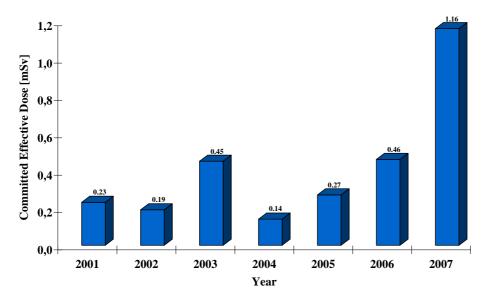
Collective Effective Doses [mSv] for Working at Selected NPP Facilities



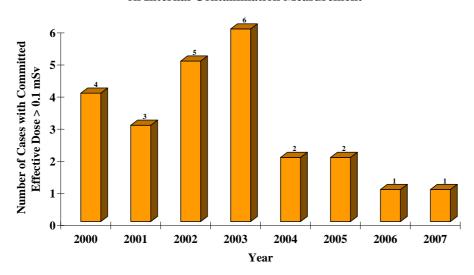
Collective Effective Doses [mSv] for Working at Selected



Maximal Committed Effective Dose of Workers



Number of Cases Exceeding the 0.1 mSv Recording Level for the Committed Effective Dose on Internal Contamination Measurement



Facts

- Most services for outages are provided by contractors
- Higher Individual Effective Doses in contractors correspond to seriousness of provided services
 - Reactor services
 - Steam Generator services
 - Reactor Coolant Pump services
 - Insulation work
 - Special decontaminations
- Maximal Individual Effective Doses Steam Generator services

Insulation work

• Internal contamination in 2006, 2007 – Reactor Coolant Pump decontamination

- Contractors must have licence for performing services important in terms of radiation protection
- Quality assurance program must be approved by State Office for Nuclear Safety (SONS)
- To ensure systematic checking of radiation protection observance at work, contractors must have a supervising person with a special professional competence (appropriate education + exam at State Office for Nuclear Safety)
- State surveillance for contractors routine inspections (legislation requirements observance, complying with NPP operator instructions, work optimization, event investigation)
- Annual meeting of SONS inspectors and contractors' representatives good practice x problems x new legislation requirements
- Implementation of personal radiation passports



Collective Effective Dose is low



Lower number of workers → increase in Individual Effective Doses