Emergency Response to Fires Involving Hazardous Materials – Regulatory Perspective

Workshop on Fuel Cycle Safety
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Project Officer
Processing and Research Facilities Division
Canadian Nuclear Safety Commission
OUTLINE

• CNSC regulation of fire safety

• Review of fuel facilities fire safety measures

• Enhancements to fire emergency response measures
  • Uranium Conversion Facility
  • Fuel Fabrication Facility

• Regulatory assessment
CNSC REGULATION OF FIRE SAFETY

- Prevent unreasonable risk to the environment and to the health and safety of persons;
- Nuclear Safety and Control Act, Regulations, licence
- Licence issued for fixed time period (five years)
- Licence conditions reviewed during renewals
CNSC REGULATION OF FIRE SAFETY (cont’d)

- Fire safety-specific licence conditions added in 2002
- *National Building Code of Canada*
- *National Fire Code of Canada*
- NFPA-801 added in 2007
REVIEW OF FUEL FACILITIES FIRE SAFETY MEASURES

- Compliance reviews conducted
- Upgrades to fire safety equipment, procedures
- Need for fire emergency response improvement
URANIUM CONVERSION FACILITY

• Complex site, UF$_6$ and UO$_2$ plants
• Significant inventories of nuclear and hazardous materials
• AHF, UF$_6$ predominate risks
URANIUM CONVERSION FACILITY
(cont’d)

- Emergency Response Team (ERT)
- Emergency Response Organization (ERO)
- Emergency Response Plan
URANIUM CONVERSION FACILITY (cont’d)

• Pre-2005 ERT emphasis on HAZMAT response
• Local fire department primary responder to significant fires
• Limitations to fire department capabilities
• Mutual aid limited in immediate area
URANIUM CONVERSION FACILITY (cont’d)

- Need for ERT to become primary responder to fires
- Need for fire department to enhance HAZMAT capabilities
- Need to enhance coordination and joint training
URANIUM CONVERSION FACILITY (cont’d)

- Enhancements implemented
- Capabilities (NFPA-600) and size of ERT
- Off hours availability of ERT
- Fire truck purchased
- Fire Department training, pre-incident plans
FUEL FABRICATION FACILITY

- Smaller site
- Pelleting, fuel bundle fabrication
- No significant inventories of non-nuclear hazardous materials
- Internal / external radiation predominate risks
FUEL FABRICATION FACILITY (cont’d)

• Fire department primary responder for significant fires
• Pre-2005 limited support available from licensee to support fire operations
• Need to enhance coordination and joint training
FUEL FABRICATION FACILITY (cont’d)

• Enhancements implemented
• ERT established for support services
• Dosimetry, decontamination, post-incident clean-up
• Fire Department training, pre-incident plans
Regulatory Assessment

- Obtain assurance that gaps adequately addressed
- Review of corrective action plans
- Monitor implementation
  - routine, specialized inspections
  - review of written submissions
- Assessment of a joint emergency exercise in 2006
Questions?

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