



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canadian Actions - Post-Fukushima



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Association (INRA)**

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JAPAN

**Condolences to the
people of Japan**

**Best wishes for a quick
recovery**



Initial Reaction

- ❖ Immediately activated Emergency Operations Centre (EOC) on March 11, 2011
- ❖ Staffed EOC 24 hours a day, 7 days a week
- ❖ Initiated discussions with international peers
- ❖ Coordinated with other Canadian government departments and agencies:
 - Health Canada
 - Foreign Affairs and International Trade Canada
 - Natural Resources Canada
 - Government Operations Centre
 - Canadian Food Inspection Agency
 - Environment Canada

Quick actions to ensure prompt response

Communications & Support

- ❖ CNSC Web site became the site of choice
 - more than 10,000 daily visitors to dedicated page
 - issued frequent updates – linking to reliable sources
- ❖ Performed source term assessment
 - to advise Canadian citizens in Japan
 - to evaluate effects in Canada
- ❖ Supported embassy staff in Japan
- ❖ Sent experts to support IAEA's Fukushima Accident Coordination Team

Getting ahead of the information wave

Facility Reviews

Issued an order to all major nuclear facilities to:

- 🍁 review initial lessons learned
- 🍁 re-examine safety cases, with focus on:
 - external hazards
 - measures to prevent or mitigate severe accidents
 - emergency preparedness
- 🍁 implement immediate actions and report on long-term

Confirming continued safety of our facilities

Technical Issues

- ❖ Verification of defence-in-depth strategy and measures to:
 - minimize frequency of abnormal operation and failures
 - control abnormal operation and detect failures
 - limit the progression of an accident to within the design basis
 - control severe plant conditions
 - mitigate radiological consequences
- ❖ Focus on verifying station capability to mitigate:
 - beyond design basis events
 - station blackout
 - internal and external flooding
 - other events concurrent with a seismic event
- ❖ Emergency management

Verification and validation

Canadian Lessons Learned

- ✿ Wake-up call to the nuclear sector
- ✿ Continued confidence in the safety of facilities, but:
 - room for continued improvement
 - opportunity to step back and re-evaluate/validate assumptions
- ✿ Established internal task force
- ✿ Establishing external advisory committee

Challenging long-held assumptions

Other Developments

- ❖ Bruce steam generator shipment to Sweden
- ❖ Chalk River Laboratories and National Research Universal reactor (NRU) licence renewal
- ❖ Gentilly-2 licence renewal
- ❖ Darlington environmental assessment and site licence

The work goes on

Canadian Lessons Learned

- ✳️ Conflicting information – making regulatory decisions
 - need to ensure accuracy – access to reliable sources
 - need open lines of communication between regulators
- ✳️ Media frenzy – 24/7
 - explaining the facts – everyone's an expert
 - continuous effort to inform the public
- ✳️ Managing response
 - coordination within bureaucracy

Communicate, Communicate, Communicate

International Activities

- ✿ G8 Leaders Summit in Paris end of May
- ✿ Ministerial meetings in June
- ✿ Special IAEA conference in June
- ✿ Special meeting of the Convention on Nuclear Safety in August 2012
- ✿ IAEA's 2012 Conference in Ottawa, Canada
 - Focus will be on lessons learned from incident at Fukushima for effective nuclear regulation

Priorities and desired outcomes?

Topics/Issues for Discussion

- ❖ Nuclear incidents are global events – impact each of us
 - Should IAEA be whistleblower on nuclear safety?
 - IRRS? Convention on Nuclear Safety? Is peer review enough?
- ❖ Better connection between WANO/INPO and regulators?
- ❖ Who speaks for health? IAEA? WHO?
- ❖ Time to agree on mandatory minimum ('safe enough') requirements
 - Clear guidance for emerging countries
 - Consistent and realistic criteria for stress tests
- ❖ Better emergency coordination
- ❖ Must enhance information dissemination
- ❖ Review INES scale – responsibility/granularity

INRA Role?

65TH ANNIVERSARY 65^E ANNIVERSAIRE



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