

# Management of the OPAL Research Reactor Safety During COVID-19 Pandemic

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18 November 2020

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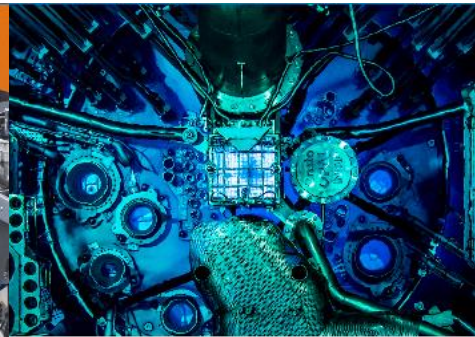
**IAEA Webinar - Maintaining nuclear safety of research reactors during a pandemic**

# ANSTO – OPAL Research Reactor

- Nuclear Science and Technology Research and Development
- Produce and use radioisotopes, isotopic techniques and nuclear radiation for medicine, science, industry, commerce and agriculture



Centre for Accelerator Science



OPAL multi-purpose reactor



Australian Centre for Neutron Scattering



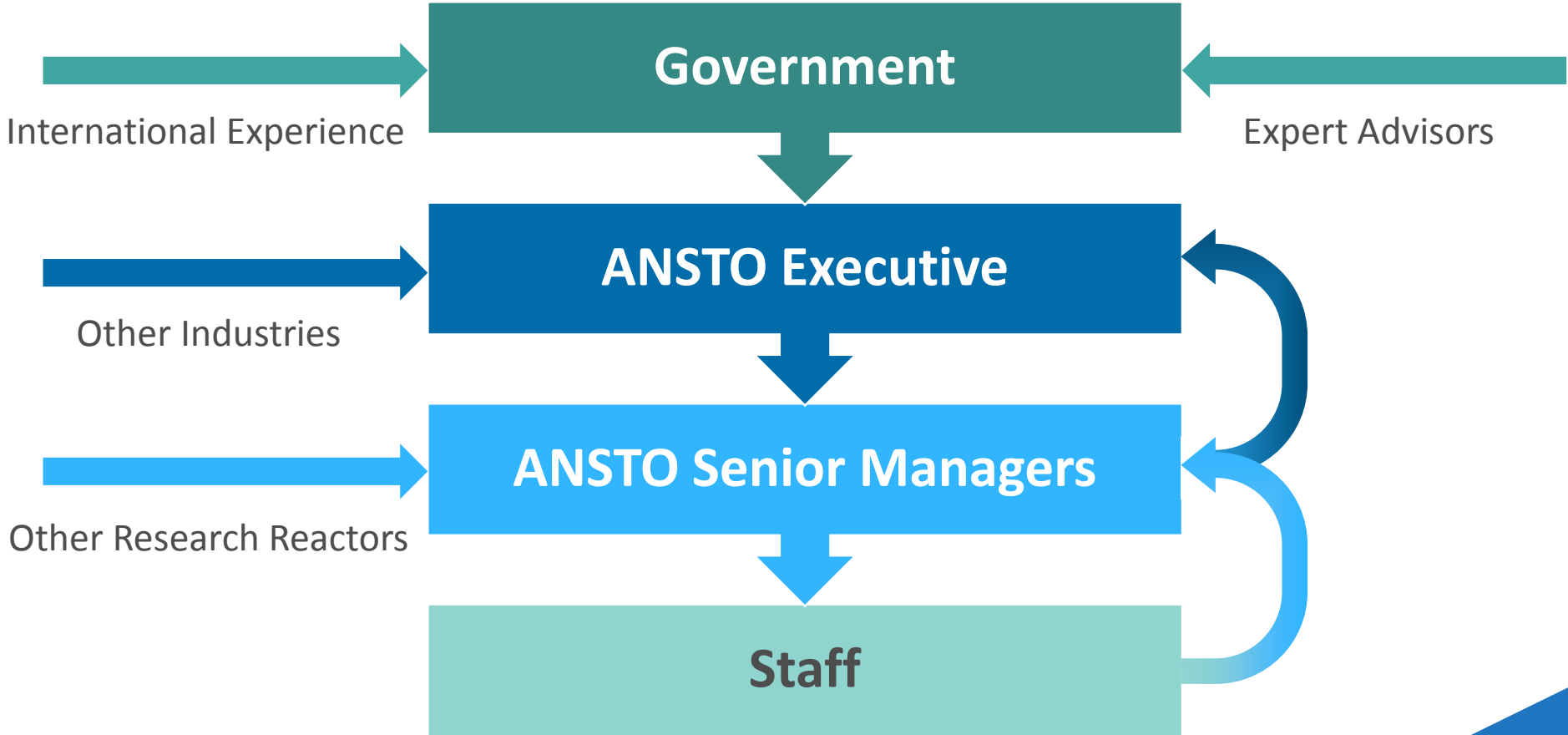
The Australian Synchrotron

- OPAL Reactor located in Sydney, 30km south of Central Business District

# Overview

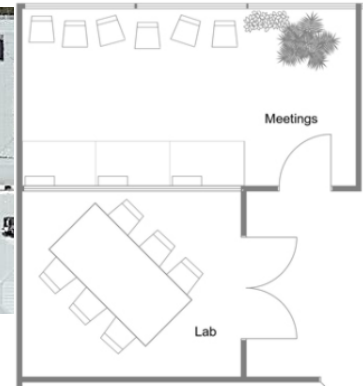
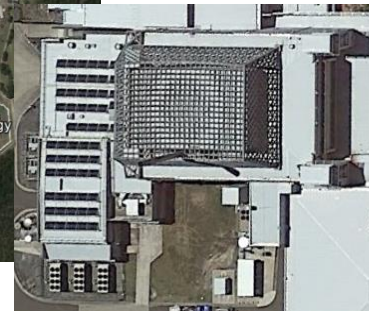
- Information and Communication
- Prevention Measures
- Response Measures
- Scenarios and Exercises
- Current Status

# Information and Communication



# Prevention Measures – National Response

- National Response - Successive layers of boundaries & Isolation



Got symptoms?  
Get tested.

Anyone with COVID-19 symptoms should be tested.

Symptoms include:



Other reported symptoms of COVID-19 include: fatigue, runny nose, muscle pain, joint pain, hoarseness, vomiting, diarrhoea, loss of appetite or other flu symptoms.

Testing is free, quick and easy. Visit [health.nsw.gov.au/coronavirus](https://health.nsw.gov.au/coronavirus)

## Have you washed your hands?



Clean your hands thoroughly for at least 20 seconds with soap and water or an alcohol-based hand rub to

NSW Health Self-Isolation Guideline

For persons with COVID-19 and close contacts

14 October 2020

This guideline is supplementary to the current Public Health COVID-19 Self-isolation Order and should be read in conjunction with the Order (available at <https://www.health.nsw.gov.au/COVID-19/Pages/COVID-19-self-isolation-order.aspx>)

**What is self-isolation?**

Self-isolation means you must stay at your home or accommodation and remain separated from others. You cannot leave your house or accommodation, unless for medical care or a permitted purpose.

**Travelling to your accommodation**

You must have direct access to the place where you will undertake self-isolation (private, hotel or other accommodation). This can travel by private car, taxi or ride-share (in the rear seat). If you are in close contact and you have no symptoms, you can travel by public transport as a last resort. You must wear a mask and ensure you physically distance.

**Monitor symptoms and seek help if they develop**

You must monitor yourself for any new symptoms. Watch particularly for:

- fever (37.5°C or higher) or history of fever (night sweats, chills)
- cough
- runny nose
- shortness of breath (difficulty breathing)
- sore throat
- loss of smell
- loss of taste

## COVID-19

Do you have a fever, cough, sore/ scratchy throat, shortness of breath, loss of taste or smell?

**Cover your mouth and nose when coughing/ sneezing. You may be asked to wear a mask.**

**Keep 1.5 metres apart from others**

**Tell staff immediately**

**Get tested for COVID-19:**

- Visit a COVID-19 testing clinic, or
- Call your GP, or
- Call the National Coronavirus Helpline 1800 020 080 (24-hour help line)

### Cleaning surfaces at home to help stop the spread of COVID-19

Coronaviruses, such as COVID-19, can survive on surfaces for a few hours or up to several days. This may vary based on the temperature, humidity and type of surface.

**How to clean**

Frequently touched surfaces	Less touched surfaces
<ul style="list-style-type: none"> <li>• doorknobs</li> <li>• handles</li> <li>• light switches</li> <li>• phones</li> <li>• touch screens</li> <li>• tables</li> <li>• hand touched items</li> </ul>	<ul style="list-style-type: none"> <li>• floors</li> <li>• walls</li> <li>• ceilings</li> <li>• window blinds</li> <li>• curtains</li> <li>• car seats</li> </ul>

Regularly clean with a household detergent followed by disinfectant or an alcohol-based hand sanitizer (70% alcohol). Clean with disinfectant wipes (alcohol based).

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**Detergent or disinfectant?**

Detergents like remove germs, dirt, and separates them so they do not get onto you. Disinfectants kill viruses and bacteria and don't remove them from surfaces. Using a detergent then a disinfectant helps ease the risk of spreading infection.

**If you have been outside**

- If you have to leave home, when you return
- wash your hands as soon as you enter and after putting groceries or other items away
- Wash your hands before you eat
- If you would not be better to do so, remove your shoes and anything if you have been on public transport or in a space where you cannot keep your hands together (transport, shopping)
- wipe down your shoes
- keep your shoes on in a garage

- National Response – Personal Health and Hygiene

NSW Health Self-Isolation Guideline

More information [www.nsw.gov.au/covid-19](https://www.nsw.gov.au/covid-19)

For free help in your language call 13 14 50



# Prevention Measures

- Boundaries
  - Buildings
  - Zones within buildings – use existing physical protection boundary and radiological area boundary
  - Personal boundaries - distancing
- Work Patterns
  - Balance remote work with onsite work
  - Separate teams – Week to Week
  - Shift Patterns
- Hygiene/Cleanliness
  - Sick leave arrangements
  - Personal hygiene
  - Surface and area cleaning
  - PPE - Masks



# Response Measures

- Reporting process and reporting tool
- Isolation and testing (close contact / casual contact)
- ANSTO Incident response team
  - Site response & facility response
- Reactor Specific Response
  - Re-train previous operators
  - Reduced onsite staffing (Operators, Engineers, Maintenance)
  - Maintenance task prioritisation
  - Reactor utilisation prioritisation
  - Minimum Staffing compliance
  - Suspend and reschedule major works
    - › Multiple contractors. Logistics & Uncertainty

# Scenarios and Exercises

	Engineering	Maintenance	Utilisation Operations	Reactor Operations
Safety Requirements	0% capacity Nil impact < 7 days	0% capacity Nil impact < 7 days	Nil impact	Minimum Reactor Operator Staffing 3 per shift.
	50% capacity Nil impact < 14 days	50% capacity Nil impact < 14 days		
Utilisation Objectives	0% capacity Nil impact < 5 days	0% capacity Nil impact < 5 days	0% capacity Nil impact < 2 hr	May reduce to 2 per shift for maximum duration of 2 hours.
	50% capacity Nil impact < 10 days	50% capacity Nil impact < 10 days	50% capacity Nil impact < 2 days	



# Current Reactor Status

## Reactor Safety and Operational Performance

- Compliance to Operational Limits and Conditions: 100%
- Maintenance Task Compliance (Safety Category 1 & 2 SSCs): >95%
- Days Operating this year (to 14 November 2020): 262 days
- Reactor Reliability (to 14 November 2020): 98%

## Operational Projects

- Periodic Safety and Security Review – progress to schedule
- Safety Culture Assessment - questionnaire and focus groups interviews complete

Thank You

