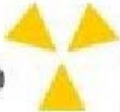


**NUCLEAR SAFETY COMMITTEE
MEETING
12 JULY 2002**

**ADDITIONAL
SEISMIC
INVESTIGATIONS**

AUSTRALIAN RADIATION PROTECTION AND NUCLEAR SAFETY AGENCY



A R P  N S A

REQUIREMENT OF ADDITIONAL INVESTIGATIONS

- ARPANSA letter to ANSTO
17 September 2001
- ‘To confirm that there is no active faulting in the bedrock at the site, or trending towards the site’

ELEMENTS OF ADDITIONAL INVESTIGATIONS

- Desk study and field reconnaissance of near-site area (5km)
- Examination of site, including excavation
- Coffey Partners and IGNS



OUTCOMES OF NEAR-SITE ASSESSMENT

- Did not reveal the existence of any faults that displace near-surface materials in the study area
- Several small scale normal faults (displacements < 30cm) observed in weathered rock exposed in road/rail cuttings
- Age of such faults is uncertain but suggested that they are not of recent origin (likely > 80 - 110 million years)



EXCAVATION

- Commenced in April
- ‘Crack’ noticed on 13 May.
ARPANSA notified
- ARPANSA officer and Consulting Engineer visited on 16 May
- Excavation completed and surface cleaned by 17 June
- IGNS confirm fault on 18 June

NATURE OF SITE FAULT LINE

- Two closely aligned faultings
- One 'normal' and one 'reverse'
- Approx N - S
- Continue across site



NEXT STEPS

- ANSTO to have studies carried out to estimate better:
 - » age
 - » size
- Alternative nearby site examined



WHAT IS A CAPABLE FAULT?

NRC definition:

- Movement at or near ground surface at least once within past 35,000 years (or recurring within 500,000 years)
- Macro-seismicity demonstrated to be associated with the fault
- Structural relationship to capable fault such that one will move the other



SOME ISSUES

- Does it change seismic hazard analysis?
- Possible displacements:
 - » impact on foundations, structures



ARPANSA ROLE

- Engaged Geoscience Australia to provide advice and assess any ANSTO reports
- International expertise through IAEA



LICENSING

- Construction Licence continues to be valid

BUT

- ANSTO will need CEO approval for foundations

OR alternative site