



Australian
Conservation
Foundation

Joint Standing Committee on Public Works Inquiry into

- **New Main Entrance at Lucas Heights**
- **Redevelopment of Building 23**

**Submission by the Australian
Conservation Foundation (ACF)**

September 2003

Background:

The Australian Conservation Foundation (ACF) has been a leading national environment organisation for over 30 years and has active conservation programs and representatives in all States and Territories. ACF promotes, defends and celebrates our environment and our shared natural and cultural inheritance.

An important focus of ACF's work is campaigning for a sustainable and a nuclear free future for Australia. ACF contends that there is no net benefit from our involvement with the nuclear industry and shares the deep community concern over the Federal Government plans for a new nuclear reactor in Sydney and the related imposition of radioactive waste transport and dumping across Australia. In this context we welcome the Public Work Committee's attention to all issues related to this project.

i) Proposed new main entrance at Lucas Heights:

ACF acknowledges the need for enhanced security measures in relation to all radioactive industries in the context of the current global political climate. ACF also agrees with the position of both the International Atomic Energy Agency (IAEA) and the US Nuclear Regulatory Commission (NRC) that in this climate all nuclear facilities, including research reactors, pose an increased safety and security risk and are potential targets. Given this we do not believe that the construction of a new entrance is a sufficient response to attempt to ensure improved radiological protection for the communities that would be impacted by any incident, accident or intentional assault on the proposed new reactor.

ANSTO's Lucas Heights facility poses the single largest radiological risk to the greatest number of Australians that exists in this country and this proposal fails to adequately recognise and reflect this.

Following the attacks in the USA on September 11, 2001 ANSTO commissioned the Australian Security Intelligence Organisation (ASIO) to undertake a security review. This found inadequacies in the existing security arrangements and the new entrance proposal arose from this review. It is ACF's contention that the events of September 11 have fundamentally changed the criteria that were previously used to formulate both a position on the net benefit of the reactor and the assumptions that underpinned the granting of a site licence.

Even the most strident advocate of a new reactor at Lucas Heights cannot claim that a deliberate multi-suicide attack using a commercial airliner as a weapon of mass destruction was addressed in the assessment or siting processes for the project, or that Australia would be involved in an external military conflict without UN approval, or that terror alerts and attacks in our region would become routine. The risks posed by the existence of this facility in the suburbs of our largest city has changed and significantly increased.

In this context what is needed is a comprehensive re-assessment of the costs and benefits of this project and an independent review of the assumptions underpinning the siting of this facility. The changed threat scenario requires a wider review of both the reactor project and ANSTO's compliance with the extant Environmental Impact Assessment, ARPANSA and previous Federal Parliamentary recommendations and conditions. ANSTO's current proposal is a piece-meal attempt to address serious and continuing inadequacies with this project and must be viewed against the wider context and not simply in isolation as one discrete initiative.

ii) Redevelopment of Building 23:

ACF supports the right of all Australians to access the medical technologies best suited to realise optimum health outcomes, including nuclear medicine. ACF does not believe that a new nuclear reactor at Lucas Heights is required in order to achieve this. A combination of non-reaction based domestic production and selected importation would clearly meet the need for medical and industrial use of nuclear materials in a cheaper, cleaner, safer way than the construction of a new reactor.

ACF agrees with the position taken on this issue by the Nobel Prize winning medical body, the Medical Association for the Prevention of War (refer to www.mapw.org.au) that:

Australia's requirements for isotopes for medical and industrial purposes can and should be met by,

(a) local production in cyclotrons and spallation sources, and

(b) importation of some isotopes such as technetium/molybdenum, which currently require reactor production.

This approach is contemporary practice in many industrial nations including the USA, Japan and the UK - only a tiny fraction of radioisotopes used are produced in their own domestic reactors. A single reactor in Canada produces about sixty percent of the world's medical isotopes. Importation of isotopes via the well-established international isotope market served Australia satisfactorily during the three month "down-time" at the existing HIFAR reactor in Sydney during February -May 2000, and it is a viable option for the future. The world already contains sufficient reactors to meet global medical, scientific and industrial needs many times over. Expansion of the range of isotopes generated in local non-reactor facilities could be promoted through a dedicated R & D program.

In this context ACF welcomes the opportunity to raise some issues concerning this proposal with the Committee.

- What analysis has been conducted by ANSTO or any other body into the opportunity costs of reactor based radioisotope production? The reactor currently under construction is the single largest capital outlay on science and technology in Australia's history whilst ANSTO's annual turnover from sales of radioisotopes is around \$20 million. How does this relate to capital outlay to return assumptions across other sectors? (Refer to Item 3)
- What extra risk management analysis has been undertaken to ensure adequate provision is made for the impacts on this project for delays in the new reactor project, especially given that the latter has already experienced significant construction delays because of seismic uncertainty, adverse weather and errors in construction? This is particularly the case given the comprehensive failure of ANSTO's existing risk management, project oversight and quality assurance mechanisms in relation to recent serious construction errors with the manufacture of the pool tank at the new reactor project. (Items 7 and 48)

- What does ANSTO see as other (non radioisotope) opportunities that may be provided by any new reactor? ANSTO's new five-year plan refers to these but critics of the reactor project repeatedly face commercial or Cabinet in confidence or vague national interest responses blocks to any detailed articulation of the rationale and perceived benefits of the reactor proposal. (Item 15)
- Who do ANSTO consider to be "other stakeholders" who will be consulted over the planned redevelopment of Building 23? What mechanism is proposed to ensure the input of the local government body, the Sutherland Shire Council, the local and district emergency management committees, emergency service providers and the related NSW agencies? (Item 35)
- ACF finds ANSTO's exemption from State and Territory laws and regulation (Item 44) to be a fundamental failing and inconsistent with community expectation and democratic processes. ACF believes this blanket exemption process has contributed to ANSTO's organisational culture of secrecy and denial and should be removed in order to facilitate greater transparency and improved performance.
- What additional seismic modelling has ANSTO undertaken given the seismic uncertainty issues faced by the new reactor project? (Items 61 and 62)
- ACF notes the conditional nature and absence of detail in relation to aspects of the current application, especially in relation to those areas concerning materials and finishes (Items 67-71)
- What consequence modelling have ANSTO or other agencies conducted in relation to the effects of an unplanned variance in negative pressure status and the implications of this for the dispersal of radioactive material? (Item 74)
- ACF maintains that all of ANSTO's operations should be based on the application of the ALATA (as low as technically achievable) principle. This provides a higher level of protection to workers, surrounding communities and the wider environment that ANSTO's proposed level of "reasonably achievable". (Items 82 and 85)
- What steps have ANSTO or any other agency taken to identify and address possible migration pathways for contaminant material through storm water? What contingency has been made should contamination be present? (Items 96 and 99)

- ACF opposes the continuing off site dumping of liquid radioactive wastes from Lucas Heights through the sewer system (Items 100 and 101)

Conclusion and Recommendations:

- (i) ACF believes that the applicant (ANSTO) has comprehensively failed to realise the project assumptions that underpinned the original PWC assessment contained in the August 1999 report *Proposed replacement nuclear research reactor, Lucas Heights, NSW*
- (ii) In particular ACF maintains that ANSTO has failed to meet the earlier PWC recommendation contained in paragraph 4.144 that:

Provided all recommendations and commitments contained in the Environment Assessment Report (EAR) are implemented during construction and commissioning and for the expected life of the research reactor, the Committee believes, based on the evidence, that all known risks have been identified and their impact on public safety will be as low as technically possible.

ANSTO have failed to implement all recommendations and commitments from the Environment Assessment Report and has further failed to give effect to the recommendations of two subsequent dedicated Senate Inquiries and an ARPANSA forum. Furthermore, the nature of “all known risks” related to this project has fundamentally changed post September 11, 2001.

(iii) ACF is concerned that ANSTO is actively avoiding appropriate accountability measures and disregarding due and proper process. ACF notes the view of the Senate Select Committee into the Contract for a New Reactor at Lucas Heights (May, 2001) that ANSTO’s actions “stem from a culture of secrecy so embedded that it has lost sight of its responsibility to be accountable to the Parliament”. ACF believe it is important that the integrity of Parliamentary process that the importance of compliance with earlier undertakings be duly reflected in the PWC’s assessment of these two ANSTO application

(iv) ACF urges the PWC to not approve these applications at this time and to instead re-visit the assumptions underpinning this project. ACF urges the PWC to commission an audit of ANSTO’s compliance status with all extant recommendations and commitments that relate to operations at the Lucas Heights nuclear facility as a pre-condition to the further examination of these two applications.

