APPENDIX 4
TO ANNEX E

SOUTH AUSTRALIAN POSITION PAPER

Presented by Mr J Holland,
Deputy Director, Premier's Department of SA
and Mr R Nichols,
Director, South Australian State Emergency Service.

The use of radioactive substances and irradiating apparatur and the transportation of radioactive ores, is controlled by regulations under the Health Act and the administration of the regulations is the responsibility of the Occupation Health and Radiation Control Branch of the South Australian Health Commission.

As a direct result of the provision, by the former Directorate of Civil Defence, of Radiation Monitoring Equipment (ie Survey and Contamination Meters and Personal Dosimeters), which were capable of measuring levels of radiation which could be expected in fallout following a ground burst nuclear weapon, there was an implied and accepted responsibility that the Civil Defence Organisation would provide the ground facilities to measure such radiation and to provide community warning.

In 1968, the production by the then Commonwealth (Department of Interior) Scientific advisers appointed by the then Commonwealth Directorate of Civil Defence (Mr H Simmonds and Dr D Posener) of the Radiological Defence Manual and its printing by the NSW Civil Defence Organisation, was accepted at that time as the basis for developing a monitoring organisation.

Since 1974 the downgrading of the Civil Defence requirement and the deterioration by time of the instrumentation, has nullified the potential for monitoring high level radiation expected from nuclear attack.

Present day legislation and counter-disaster planning takes no cognition of the nuclear hazard.

NEW SOUTH WALES STATE EMERGENCY SERVICES AND CIVIL DEFENCE

POSITION PAPER

APPENDIX 5
TO ANNEX E

RESPONSIBILITIES AND CAPABILITIES IN PEACETIME

Radiation Accidents

Minor incidents - spills of small quantities of radioactive materials, etc - are the responsibility of authorities such as the New South Wales Health Commission (Radiation Branch) and/or the Australian Atomic Energy Commission.

A major peacetime radiation accident could arise at the Australian Atomic Energy Research Laboratories at Lucas Heights. Methods of responding to such a situation are thed responsibility of the AAEC and, if applicable, the New South Wales Health Commission. The plan for response (APTCARE) involves NSW SES & CD providing assistance if and when requested by the New South Wales Police.

A second possible source of a major radiation threat to the public could arise from the presence of nuclear powered vessels in or near New South Wales ports. At present, visits of such vessels do not occur. Studies of appropriate safety requirements have been made (1978), but have not assigned definitive responsibilities. In brief, no capabilities currently exist to respond to an accident of this kind.

RESPONSIBILITIES AND CAPABILITIES IN WARTIME

The Threat

Ground burst nuclear weapons exploding within some hundreds of kilometres from populated areas can lead to deposition of hazardous radioactive fallout. The resulting radiation can be sufficiently intense to cause early illness ("radiation sickness" - the acute radiation syndrome) and death, to unprotected people.

The "worst case" is considered to be such an explosion (or explosions) in a large city.

As distinct from many published possible overseas scenarios, we do believe that credible Australian situations are likely to leave much of the adjacent populated area fallout-free, and that therefore it is not inevitable that the whole population of the city will have to be protected from fallout radiation for an indefinite period.

Accordingly, it is anticipated that humanitarian relief operations - care of casualties and the homeless - can be initiated at an early stage in those areas that are

free of the fallout hazard. Such a concept necessitates timely information distinguishing between fallout-affected and fallout-free areas. Consequently, an in-place fallout monitoring system is required.

Protection

There are two principal counters to fallout radiation.

The first is to be somewhere else, difficult to achieve in view of the likely unpredictability of the specifics of any possible attack. Nevertheless, a dispersal policy, whether strictly controlled or merely encouraged on a voluntary basis, and implemented during a crisis period, could reduce the number of people at risk should an attack eventuate.

There are conceivable situations during which an Australian Commonwealth or State Government could perceive a sufficiently visible developing threat requiring that it give appropriate public advice to the population.

The second counter is the use of in-place fallout shelter. Following a nuclear attack, the population would "automatically" (or by Government advice) go to protective shelter.

There are two main kinds of fallout shelter. The first is "public shelter", in locations such as those already identified by the Fallout Shelter Survey Team (about 1,000,000 spaces in New South Wales).

The second is "domestic fallout shelter", which, under currently foreseeable circumstances, is likely to be overwhelmingly of the "expedient" type, hastily constructed in a crisis period during which people become sufficiently aware of a threat that they devote some effort to providing protection for themselves.

"Public Shelter" is non-existent in New South Wales. Although the "spaces" have been identified, lack of planning and other resources has prevented development of management systems for utilising these spaces and for consequently publicising them when required.

Available information on domestic shelters is inadequate. The NDO pamphlet "Domestic Fallout Shelter Guide 1980" has very restricted applicability because of the construction efforts required; these are unlikely to be rapidly implemented in a crisis period. A negligible number of such shelters can be built in peacetime, because of the effort and financial cost which cannot be easily justified.

The booklet "Survival in the Nuclear Age" provides the only guide - and a rather limited one at that - to "hasty" shelter. Much more extensive written guidance is needed.

along the lines of the UK "Protect and Survive", and C H Kearney's "Nuclear War Survival Skills".

In a crisis situation the population and the mass media will demand appropriate and sensible information and advice. If such material is not thoroughly preplanned and "canned", (and nationally co-ordinated), the conflict arising from opinions of various "experts" (and non-experts" will lead to utter confusion. Ad hoc pronouncements just won't do.

Monitoring

In conformity with the recommendations of a 1966 Working Party, NSW SES & CD is establishing the basis of an in-place monitoring system for fallout radiation.

Since fallout radiation is undetectable by human senses, special instrumentation - RADIAC equipment - is needed to measure it. Some such instruments exist, and their operational viability is checked by the Bandiana Radiac Calibration Centre.

The people to actually do the monitoring - to take and report radiation measurements - are SES volunteers who are part of the NSW SES & CD Scientific Service. They are recruited at Local Government level, and, within New South Wales, they report to the SES headquarters at that level.

Their reports are processed at headquarters, and converted to "intelligence"(ie, culled and collated), then disseminated as needed so that decision-makers can be advised of the location and extent of any fallout radiation threat.

Provision of this advice is the responsibility of NSW SES & CD Scientific Officers, who assess the implications of the processes measurements.

Standing Operating Procedures for doing this exist and are taught to volunteers. They closely agree with material taught at the then Civil Defence School, Mt Macedon, in the late 1960s.

There are currently about 4 volunteers in the Scientific Service, together with a substantial fraction of the approximately 240 volunteers of the Intelligence Service and who have a dual role.

Responsibilities

Provision of a network of monitoring stations, and of people to interpret measurements, is quite beyond the peacetime resources of the Radiation Branch of the New South Wales Health Commission. Further, the problem of nuclear attack is outside the Commission's day-to-day concerns. In the extraordinary condition of a fallout

situation necessitating the declaration of a State of Emergency under the New South Wales State Emergency Services and Civil Defence Act, 1972, (as amended), the SES volunteer system should be activated, together with the full resources and expertise of the NSW Health Commission's Radiation Branch and the Director of the NSW SES and CD would assume his statutory responsibility.

The Standing Operating Procedures have evolved and developed over a number of years, and provide the simplest manual system we have been able to devise. Nevertheless, as with other systems, the method requires practice (exercising), as well as local organisational modifications to meet the diverse needs of the various local and other governmental authorities in New South Wales.

Adaptations of the system to Tasmania State Emergency Service appear to have proved acceptable.

NSW SES & CD does not envisage an extensive peacetime in-place system. Rather, it seeks to provide a core of knowledgeable people, one which can be rapidly expanded should the need arise. Because a nuclear threat cannot conceivably have a significant lead time, NSW SES & CD considers it essential that an adequate core exists in peacetime. Otherwise, who will train the instructors during a threat period?

Although there are now a number of volunteers involved in the Scientific Service in New South Wales, the numbers and training effort available fall far short of minimum requirements. Moreover, the available radiac equipment is insufficient for what we regard as a minimum stockpile (again, because of the impossibility of procurement should a perceived threat emerge).

It is considered the position could be significantly improved by Commonwealth Government encouragement of the needs.

AUSTRALIAN FEDERAL POLICE POSITION PAPER

APPENDIX 6
TO ANNEX E

Presented by Chief Supt I C Broomby

The Australian Federal Police are charged by virtue of the AFP Act 1979 Section 8:

"8.(1) The functions of the Australian Federal Police are -

(a) the provision of police services in relation to the Australian Capital Territory;

(b) the provision of police services in relation to -

(i) laws of the Commonwealth:

(ii) property of the Commonwealth (including Commonwealth places) and property of authorities of the Commonwealth ; and

(iii) the safeguarding of Commonwealth interests: and

(c) to do anything incidental or conducive to the performance of the foregoing functions.

(2) The provision of police services in relation to a Commonwealth place in a State, being services by way of the investigation of offences against the laws of that State having application in relation to that place by virtue of the Commonwealth Places (Application of Laws) Act 1970, shall be in accordance with arrangements made between the Commissioner of Police (however designated) of that State.

(3) In this section -

"Commonwealth place" has the same meaning as in the Commonwealth Places (Application of Laws) Act 1970:

'Police services" includes services by way of the prevention of crime and the protection of persons from injury or death, and property from damage, whether arising from criminal acts or otherwise.'

For the purposes of this paper my comments relate only to the role of the AFP within the Australian Capital Territory where we have the traditional community policing function. The AFP may well have other lead responsibilities in relation to the subject matter outside the ACT particularly at the Australian Atomic Energy Establishment at Lucas Heights, where we have a security role.

The AFP as part of our policing role have attempted to identify sites of potential disasters and the establishment of contingency plans in support of the ACT Disaster Plan to deal with such occurrences. This includes the Research School of Physics at the Australian National University

which is considered to be our greatest threat as far as radiation leak is concerned.

The principle role of police is to establish and contain a perimeter around the site of an emergency. This function includes the evacuation of persons from within the perimeter. The AFP could be charged with the management of a radiation based emergency in consultation with expert organisations.

The AFP could be required to carry out their containment task in support of another emergency organisation such as the ACT Fire Brigade, who in the case of fire are charged with legal responsibilities. This, in fact, was the case when fire destroyed part of the ANU's Physics School in the 1960s. A quantity of radioactive material was in the School at the time and necessitated emergency measures to prevent radiation escape.

Should a serious radiation hazard occur (which in the terms of the definition of a disaster within the ACT, "causes, or threatens to cause, loss of life or property, or injury to persons or property, or distress to persons, or that in any way endangers the safety of the public in the Territory, protection against which is beyond the capability of the responsible emergency service organisation to contron and co-ordinate"), the ACT disaster plan would be brought into effect by the Minister for the Capital Territory. The Officer-in-Charge, ACT General Policing Division of the AFP is then responsible to he Minister for the conduct of Counter-Disaster Operations.

TASMANIAN POSITION PAPER

"MEMORANDUM OF AGREEMENT made this Eleventh day of December 1980

B e t w e e n -

The Hon Minister for Public Health for the State of Tasmania,
The Hon Minister for Police and Emergency Services for the State of Tasmania,
The Hon Attorney General for the State of Tasmania,
The Director of Public Health, and
The Director of Emergency Services

AGREED

1. Whereas the responsibility for the protection of the general public from the effects of radiation lies with the Minister for Public Health whose Principal Delegate in this matter is the Director of Public Health in accordance with the Radiation Control Act 1977 and whereas the Director of Emergency Services is responsible under the Emergency Services Act 1976 in time of enemy action or hostilities against the State to exercise co-ordination authority over all civil defence measures as defined by Commonwealth and State.

2. Nothwithstanding the responsibilities detailed in para 1, in the event of actual or potential threat of nuclear radiation hazard to life or property or persons in the State of Tasmania generated by radioactive fallout resulting from the explosion of a nuclear weapon the resulting fallout from which does or is likely to affect Tasmania, the Director of Emergency Services shall provide the operational infrastructure and manpower for the monitoring of radiation levels, the passage of information relating to radiation monitoring, the provision of radiation monitoring headquarters, monitoring and operational staff, the dissemination of operational information, the implementation of measures to protect the population of Tasmania from the effects of such nuclear radiation, and all training and public education relevant to those functions.

3. The Director of Public Health is hereby appointed Chief Radiation Officer to the State Emergency Service, and the Health Physicist of the Division of Public Health is appointed Deputy Chief Radiation Officer to the State Emergency Service, the duties and responsibilities of the position of Chief Radiation Officer and Deputy Chief Radiation Officer being to advise the Director of Emergency Services on all matters relating to protection of the population of Tasmania from radiation arising from the explosion of nuclear weapons.

4. In all situations involving nuclear radiation resulting from the explosion of a nuclear weapon the provision of advice to Government on measures necessary to protect the community from the effects of nuclear fallout will be the responsibility of the Chief Radiation Officer in consultation with the Director of Emergency Services."

RADIATION PROTECTION IN THE NORTHERN TERRITORY

POSITION PAPER

APPENDIX 8
TO ANNEX E

Presented by Mr I A Prince

General

The Northern Territory Department of Health is responsible for radiation protection in the Northern Territory The relevant Acts include:

Radiation (Safety Control) Act
Radiographers Act
Mines Safety Control (Radiation Protection) Regulations

(The Mines Safety Control (Radiation Protection) Regulations are implemented in conjunction with the Director of Mines (NT) who also has responsibility for the safe transport of "yellow-cake" under the Radioactive Ores and Concentrates (Packaging and Transport) Act).

The Health Department is also responsible for the provision of radiology and nuclear medicine related services in the Northern Territory hospitals.

Normal Radiation Protection Services

The Radiation (Safety Control) Act establishes control over irradiating apparatus and radioactive substances (except uranium) and was commenced in 1980.

To implement the provisions of this Act the Department has employed a Physicist and support staff and has established inspectorial and laboratory services. Through these services, radiation protection in the Northern Territory is assured. The role of the Physicist inter alia is to:

a. carry out inspections of X-ray equipment and radioactive sources;

b. provide laboratory services and calibrations;

c. supervise disposal of radioactive substances;

d. prepare and present training programs and education programs on radiation protection;

e. undertake environmental radionuclide assessments;

f. participate in radiographic quality control programs;

g. develop policy regarding radiation protection and participate on Northern Territory and National radiation protection committees;

h. provision of uranium radiation protection services;

i. participation on uranium mining rehabilitation projects;

j. delegate under the Commonwealth Navigation (Cargo - Hazard Prevention) Regulations (Reg 11A).

Emergency Radiation Protection Services

The Physicist and support staff provide the nucleus of a specialist radiation protection group for emergencies in the Northern Territory. These emergency situations generally fall into two categories:

a. Local accidents and minor situations and emergencies. This category usually includes minor accidents, spills or releases and would be adequately handled by Department of Health staff. Minor situations and emergencies include air crashes involving radioactive material, visits of nuclear powered vessels and other occurrences which require close collaboration with other organisations such as Northern Territory Emergency Service, Department of Mines and Energy, Department of Aviation, Australian Atomic Energy Commission, Australian Radiation Laboratory and so on. These situations would normally be localised and be simply handled. Nevertheless careful planning, education and training have been instituted to ensure the efficient handling of these occurrences.

b. Major civil emergencies. This class involves major emergencies such as nuclear bomb detonation, fall-out cloud traverse and other major contamination incidents. These situations would normally come under the control of the Northern Territory Disasters Act. The role of the Physicist and staff would then be to implement the disasters or emergency radiation protection plan as instructed by the Counter-Disaster Council and to provide specialist advice and liaison as required.

The responsibilities include education and training of emergency specialist groups, general emergency service personnel and of the general public together with the continued development of major emergency radiation protection plans in conjunction with the Northern Territory Emergency Service. Other responsibilities include checking of monitoring equipment, liaison with medical and other health services in the Northern Territory, and the preparation of related emergency resources and facilities.

Because of the geography and demography of the Northern Territory, close liaison has been established with the local Emergency Service and novel plans for protecting the general public are being considered.

NATIONAL RADIATION LABORATORY, CHRISTCHURCH, NEW ZEALAND

Position Paper presented by Dr A C McEwan APPENDIX 9 TO ANNEX E

The National Radiation Laboratory is a specialist scientific unit in the Bureau of Public Health and Environmental Protection of the Department of Health with responsibility nationally for the protection of the health of persons likely to be exposed to harmful radiations and for the maintenance of radiation dosimetry standards.

Its functions include the following:

a. Administering the radiation protection legislation*, and by anticipation of the introduction of new forms of radiation hazards, including those presented by non-ionising radiations, providing statistical and scientific data for use in promoting any necessary extensions to legislation.

b. Maintaining national primary X-ray standards and the provision of a calibration service for clinical dosimeters and other radiation measuring instruments.

c. Operating a service for monitoring the radiation doses received by persons occupationally or otherwise exposed, and investigating any cases of suspected over-exposure.

d. Operating advisory and inspection services to foster the adoption by users of safe working practices. Advisory services include provision of codes of practice and training courses where appropriate.

e. Undertaking surveys and research aimed at assessing and improving radiation protection measures and programs.

f. Arranging that each source of radiation, whether radioactive material or irradiating apparatus, is the responsibility of a person licensed to use it for a specified purpose.

g. Controlling the import, export, manufacture, transport and disposal of radioactive materials, and acting as the national "competent authority" in relation to international transport of radioactive materials.

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* The Radiation Protection Act 1965 and Regulations made under this Act.

h. Monitoring the environment for the presence of radioactivity, and acting as a collaborating laboratory with the WHO International Reference Centre in the field of environmental radioactivity.

i. Providing physical calibration, support and advisory services to other Department of Health divisions, and other government departments and agencies. This function has given rise to involvements such as:

(1) Peacetime nuclear accident response, and in particular an assessment of personnel and site decontamination levels.

(2) Contingency planning for radioactive satellite debris. In 1979, prior to the US Skylab satellite re-entry, contingency plans were drawn up to give guidance on actions to be taken in the event of debris, particularly from radioactive components, falling in New Zealand.

(3) Assessment of the radiological consequences of an outbreak of nuclear warfare, for the New Zealand population.

(4) Nuclear shipping monitoring. The Laboratory has conducted programs since 1976 for the monitoring of possible radioactivity emissions from nuclear powered shipping in New Zealand ports in accordance with the requirements of the NZ Atomic Energy Committee report 500, "New Zealand code for nuclear powered shipping". In addition to routine monitoring, teams have been trained to carry out emergency monitoring in the event of an accident, and accident consequences have been assessed.

RADIATION PROTECTION TRAINING CONDUCTED AT THE AUSTRALIAN SCHOOL OF NUCLEAR TECHNOLOGY

APPENDIX 10 TO ANNEX E

Position Paper presented by Mr B Toner

The Australian School of Nuclear Technology was established in 1964 to help meet the need for additional facilities for instruction in nuclear science and technology.

The University of New South Wales and the Australian Atomic Energy Commission have cooperated to establish the School as an Institution capable of providing a teaching basis for the transfer of certain aspects of the nuclear technology to organisations from within Australia and to overseas countries.

The School is controlled by a Board consisting of representatives of the University of New South Wales and the Australian Atomic Energy Commission and a representative of the Australian Institute of Nuclear Science and Engineering.

The Principal of the School is responsible to the Board for operation of the School.

Located adjacent to the Lucas Heights Research Laboratories, about 40 kilometres from the centre of Sydney, the School has its own teaching laboratories as well as access to both the University and the research facilities of the Australian Atomic Energy Commission (AAEC).

In presenting the courses at the School lecturing staff are drawn mainly from the Commission and the University of NSW but additional lecturing staff are also drawn from other Universities and organisations such as the Commonwealth Scientific Industrial Research Organisation (CSIRO), Sydney Hospitals and the Health Commission of NSW.

Approximately twelve hundred participants have attended courses at the School since its inception in 1964. At the present time participants from overseas countries represent nearly fifty percent of the course complement. To date thirty-four countries have been represented on courses at the School. As such the School contributes in a significant manner to the Australian Overseas Aid Program.

The program of courses for 1983 is:

Introductory Nuclear Technology Course No. 1 24 January - 18 February 1983	4 weeks
Radiation Protection Course No 6, 7 Mar - 1 Apr 1983	4 weeks
Radioisotope Course for Non-Graduates No 32 30 May - 24 June 1983	4 weeks
Introductory Atomic Energy Course No 3 4-15 Jul 1983	2 weeks
Radioisotope Course for Graduates No 29 25 July - 19 August 1983	4 weeks

Nuclear Techniques in the Mineral Processing Industry
29 August - 9 September 1983 (conducted on behalf of IAEA)

2 weeks plus one week at University of Queensland and six weeks in Philippines.

Radionuclides in Medicine No. 11 19 Sep - 14 Oct 1983 4 weeks

Industrial Applications of Radioisotopes Course No 2 4 weeks
14 November - 9 December 1983.

The course offered by the School in Radiation Protection has been conducted as a course in its own right since 1978. Prior to 1978 radiation protection principles and practice were limited to those elements contained within the courses on radioisotopes. Although these courses still retain their component of radiation protection in the subject matter and the practical work, it is not as extensive as that offered on the separate course in radiation protection.

It would be difficult within the time scale of the intensive courses, to provide a single general purpose course of sufficient scientific depth to cover each specific area concerned with ionising radiation. The subject matter within each course although specific in its presentation, is arranged with sufficient flexibility to be applicable to a variety of occupational groups with related needs and interests.

In providing a number of intensive courses, normally of four weeks duration, the School has scheduled its overall program so that each specific course is offered at approximately the same time each year. Each course is offered once per year and at this stage is restricted to twenty participants.

The wide program of courses offered by the School can be seen as fairly extensive in the overall field of nuclear technology at both graduate and non-graduate level. The School on occasions conducts courses on behalf of the International Atomic Energy Agency.

Although the School does not conduct degree or diploma courses, in relevant cases participants may obtain credit for successful attendance at a course by application through the normal university channels. Examination by assignments on the theory and a merit grading of the participant's performance in the practical experiments is applicable to most courses. Those satisfying the examiners are issued with a certificate authorised by the Board indicating satisfactory completion of the course.

The radiation protection course is held in March each year and caters for both non-graduate and graduate participants. A certain amount of knowledge and experience in the radiological field is necessary in order to cope with the subject matter presented on the course.

The objective of the radiation protection course is to provide training for persons who may be appointed as radiation safety officers, and for those who require a knowledge

of radiation protection principles and practices in their work. Participants from overseas may avail themselves of the opportunity for a post course attachment to an appropriate organisation within Australia.

For participants who wish to attend a radiation protection course as a future objective in their training but do not have the necessary background experience, other courses at the School are available as a pre-requisite.

The policy of the School in relation to all its technical courses, is to ensure a sound scientific basis is provided by the subject matter and practical sessions in order for the participant to be able to develop his own knowledge and experience in his own particular field of interest.

The radiation protection course is conducted over a period of four weeks and includes approximately fifty-five hours of lectures and tutorials. Most of the afternoons on the course are devoted to practical sessions in the School's laboratories or field work at the Atomic Energy Commission.

THE DEPARTMENT OF NATIONAL DEVELOPMENT AND ENERGY, CANBERRA

POSITION PAPER

APPENDIX 11
TO ANNEX E

The following is a statement of Departmental responsibilities relating to radiation protection.

The Department of National Development and Energy has primary responsibility for all policy matters concerning radioactive waste management and management of former atomic weapons test sites in Australia.

A principal concern relates to the development of national arrangements and guidelines, including codes of practice, for safe storage/disposal of radioactive wastes, in conjunction with other Commonwealth and State authorities. Generic criteria are presently being developed for management of wastes arising from industrial, research and medical use of radionuclides: this includes criteria for long-term storage facilities and shallow ground burial.

Access to all former atomic test sites is restricted with on-site surveillance at Maralinga being maintained by the Australian Federal Police.

The Department also has a policy role in the application of emergency procedures at AAEC's Lucas Heights Research Establishment. The primary concern is the legal and political status of the emergency plan (APTCARE), in particular, formal approval of the plan by the Commonwealth and NSW Governments.

BUREAU OF METEOROLOGY

APPENDIX 12
TO ANNEX E

POSITION PAPER

Introduction

Since the early 1950s the Bureau has been involved in a number of activities related to this subject. Examples include the UK atomic testing at Monte Bello, Maralinga and Emu Field, monitoring fallout from nuclear testing at Mururoa and visits by nuclear warships to Australia.

During the period of UK atomic testing in Australia, the Bureau provided meteorological support to the then Department of Supply, established a meteorological station at Maralinga and conducted investigations regarding dispersion of nuclear fallout. Since then the Bureau has conducted a number of investigations in response to specific requests.

Former Directors of Meteorology represented the Bureau on the Australian Ionising Radiation Advisory Council (AIRAC) and its forerunner the Atomic Weapons Test Safety Committee. The Bureau of Meteorology is no longer represented on AIRAC.

Bureau Responsibilities

The Bureau of Meteorology has no formal assigned responsibilities in matters relating to the protection of the public of Australia from the effects of ionising radiation.

In recent years the Bureau's involvement has been limited to the provision of occasional forecasts in response to specific requests for information. There are no plans for increased activity in this field.

APPENDIX 13
TO ANNEX E

THE RESPONSIBILITIES OF THE PROTECTIVE SERVICES COORDINATION CENTRE IN MATTERS RELATING TO THE PROTECTION OF THE PUBLIC AGAINST IONISING RADIATION

POSITION PAPER

One of the responsibilities of the Protective Services Coordination Centre (PSCC), Department of Administrative Services, is the overall coordination of the Vital Installations program. In this regard it is also responsible for organising activity within those areas of particular concern to the Commonwealth.

The vital installations program is an important integral part of national counter-terrorist planning and the main objective is to protect the selected establishments from acts of terrorism. Although no specific threat to the installations is currently anticipated, their obvious vulnerability and national significance require that protective security arrangements, damage mitigation measures and contingency plans be developed to ensure a speedy and effective response to a terrorist attack or any other disruptive incident (including terrorist action involving ionising radiation hazards). The objective will be to provide for a balanced, basic level of protection which can be upgraded rapidly if the perceived threat increases.

At this stage the program is still at a developmental stage and it has been necessary to concentrate on contingency plans for a small number of vital national installations.

A Vital Installation has been defined as a facility, installation or resource, the loss of whose products or services would severely disrupt the orderly life of the community, or which, if damaged, would cause a major public hazard. The Australian Atomic Energy Commission's Lucas Heights Research Laboratories are an example of the latter category.

The vital installations program concerns the safety, orderly life and well-being of the community. It is not directly related to those installations considered significant to national defence interests, although some coincidence of interests could occur, particularly where these include civil defence planning interests affecting centres of population. The following criteria apply in the selection of vital installations:

a. the loss or critical impairment of the capability of the installation would severely disrupt the orderly life of the community and no practical alternatives or substitutes are

202. a. (continued)

readily available; and/or

b. the installation is of public importance because of the major toxic, lethal or other public hazard that could result if it were placed at risk.

A vital national installation is a vital installation in which the Commonwealth and one or more State/Territory Governments have substantial interests and responsibilities, and/or the installation is of major national economic importance. The designation of the installation as a Vital National Installation will be with the agreement of all Governments with relevant jurisdiction and take into consideration the views of the owner(s) of the installation.

Protective security and contingency planning include measures for damage mitigation, alternative supply and the restoration of capabilities for supply of products or services following the loss or impairment of functions, from whatever cause.

PSCC also has certain responsibilities for the protection of VIPs against acts of terrorism whether these acts involve ionising radiation or not.

WA DEPARTMENT OF PUBLIC HEALTH — APPENDIX 14 TO ANNEX E

STATE X-RAY LABORATORY - PHYSICS DIVISION

Position Paper presented by Mr B E King

The Physics Division of the State X-Ray Laboratory provides the radiation protection service for users of X-ray equipment, radioactive substances and non-ionising radiations in Western Australia. The Division provides the necessary administrative and technical services to enable the Radiological Council, the Statutory Authority appointed under the Radiation Safety Act 1975, to carry out its functions provided for in the Legislation.

Statutory Functions

The Division maintains the system of licensing of users of radiation and registration of facilities. The staff of the Division comprise a team of inspectors appointed under the Act with powers to enter premises, investigate radiation matters, take measurements etc.

Radiation Monitoring

The Division operates a film badge radiation monitoring service which is utilised by most users of radiation within the State. There is a complement of portable instruments for monitoring of ionising radiation for use in the field. At the Laboratory there is fixed equipment for measurement and analysis of samples of radioactive material using a low level counter and a multi-channel analyser. There is a continuous sampling program of beta ray activity in the atmosphere. Facilities are provided for checking the calibration of the ionising radiation monitoring instruments to ensure that they are performing correctly. The Division has technical staff to service the radiation measuring and counting equipment and to maintain it in good operating condition.

Mining and Milling of Radioactive Substances

Although statutory responsibility for safety in the mining and milling of radioactive substances comes within the mining legislation, the Mines Department looks to the Physics Division for expertise in this area. The Division is involved in the surveillance of this area of potential radiation exposure of workers.

Visits of Nuclear Powered Warships

Personnel of the Division form part of the State team which is prepared to act should an emergency involving a release of radioactive material from a nuclear powered warship visiting Western Australia arise. The officer in charge of the Division or his Deputy is nominated as the

radiation monitoring officer under the procedures developed by the Federal Government and personnel of the Division are rostered to be available to take part in the emergency monitoring procedures in the field. The radiation monitoring officer would advise on action necessary to protect the health of the public, including withholding foodstuffs from the market and evacuation of the public.

Emergency Action

The Physics Division of the State X-Ray Laboratory is the State's contact centre 24 hours a day for radiation emergencies or suspected emergencies. This is arranged through the switchboard of the Queen Elizabeth II Medical Centre at Nedlands, near Perth.

Transport of Radioactive Substances

It has been agreed by the State bodies concerned that the Public Health Department will be the competent authority under the Commonwealth's Code of Practice for the Safe Transport of Radioactive Substances. Where appropriate, the Division will exercise the responsibilities of the competent authority set out in the Commonwealth Code.

SOUTH AUSTRALIAN HEALTH COMMISSION APPENDIX 15

Position Paper presented by Mrs J Fitch TO ANNEX E

The measurement of radiation and the scientific assessment of radiation hazards occurring in South Australia is the responsibility of the SA Health Commission through its Radiation Control Section. This Section has 11 graduate scientists and 2 radiographers (expected shortly to increase to 12 and 3 respectively), all of whom are trained to undertake a wide variety of radiation measurements.

Based on these scientific assessments, decisions relating to preventive measures to be taken to protect the public in South Australia are taken by senior medical officers of the Public Health Service. Should the hazard be sufficient, a "disaster" may be declared and in this case the State Disaster Plan would come into operation. This includes a health and medical emergency strategy plan. In the case of a lesser hazard, the Health Commission handles the situation directly, and it may invoke part or all of the health and medical emergency strategy plan, and call on other resources, as appropriate.

A specific plan also exists to deal with spillages of dangerous substances including radioactive substances, for example in a transport accident. This plan is the responsibility of the Health Commission but it allows co-ordination of other resources such as local government, fire brigade, etc.

The "Radiation Protection and Control Act, 1982" was passed in April 1982 and sections of it will come into effect on 5th November, 1982. One such section gives powers to deal with dangerous situations.

For the purposes of this Act, the Health Commission has appointed as authorised officers, the scientific and technical staff of the Radiation Control Section, the medical staff of the Occupational Health and Radiation Control Branch, and a small number of senior health surveyors, in addition to the Principal Health Commission Officer, Public Health Service (a total of 24 authorised officers). These officers are empowered to give directions orally in the circumstances of any imminent danger from radiation or contamination.

No specific planning has been undertaken for the treatment of radiation casualties. The medical expertise which would be required exists in the one radiotherapy department in South Australia, which is located in the Royal Adelaide Hospital. Four hospitals have departments of nuclear medicine whose personnel could be called upon to assist in medical evaluation and treatment of radiation casualties. These hospitals are located in various parts of Adelaide.

PART III
DIVISION IV

(2) The application for review must be made within one month after the making of the decision to be reviewed, but the Supreme Court may, if it is satisfied that it is just and reasonable in the circumstances to do so, dispense with the requirement that the application be so made.

(3) A person making a decision referred to in subsection (1) shall, if so requested in writing by any person affected by the decision, give a written statement of the reasons for the decision.

(4) If a written statement of the reasons for the decision is not given at the time of the making of the decision and the person affected by the decision within fourteen days requests in writing that he be given a written statement of the reasons, the time for making the application for review shall run from the time of service upon the person of the written statement of those reasons.

(5) The Supreme Court may, on the review, do one or more of the following, according to the nature of the case—

(*a*) confirm the decision subject to the review;

(*b*) substitute, or make in addition, any decision that should in the opinion of the Court have been made in the first instance;

(*c*) make any further or other order as to costs or any other matter that the case requires.

DIVISION V

DIVISION V—DANGEROUS SITUATIONS

Powers to deal with dangerous situations.

42. (1) Where the Commission considers that a dangerous or potentially dangerous situation exists involving actual or threatened exposure of any person to excessive radiation or contamination of any person or place by radioactive substances—

(*a*) the person responsible for the danger or potential danger or any person affected by it may be directed to take, or refrain from taking, any specified action;

(*b*) the radiation apparatus or radioactive substances giving rise to the danger or potential danger or anything contaminated or affected thereby may be seized, removed, disposed of, treated or otherwise dealt with;

or

(*c*) any other direction may be given, or action taken,

to avoid, remove or alleviate the danger or potential danger.

(2) Directions may be given or action taken under subsection (1) by the Commission or, with the prior approval of the Commission, by an authorized officer, member of the police force, or other person appointed for the purpose by the Commission with the approval of the Minister.

(3) An authorized officer may exercise the powers conferred by subsection (1) without the prior approval of the Commission if he considers that the danger is imminent.

(4) Any directions under subsection (1) may be given—

(*a*) by notice published in the *Gazette*;

(*b*) by instrument in writing served upon the person to whom they are directed;

or

(*c*) in the circumstances of any imminent danger, orally.

(5) Where a person—

(*a*) hinders or obstructs any person exercising any power, or complying with any direction, under this section;

or

(*b*) contravenes, or fails to comply with, a direction given under this section,

that person shall be guilty of a minor indictable offence.

(6) Where—

(*a*) costs or expenses have been incurred by the Commission in taking any action, or causing any action to be taken, under this section;

and

(*b*) the danger or potential danger in respect of which the action was taken resulted from an act done or omission made, by any person in contravention of this Act,

the Commission may recover those costs or expenses from that person by order of the court made in proceedings for the recovery of any penalty in respect of the act or omission, or by separate action in any court of competent jurisdiction.

DIVISION VI—REGULATIONS

DIVISION VI

Regulations.

43. (1) The Governor may make regulations for the control of activities related to radioactive substances and radiation apparatus and for protection against the harmful effects of radiation.

(2) The activities referred to in subsection (1) include (but are not limited to) the activities of exploring for, or mining or milling, radioactive ore, or producing, manufacturing, supplying, keeping, conveying, using, disposing of or otherwise dealing with radioactive substances or radiation apparatus.

(3) Without limiting the generality of the foregoing, the regulations may—

(*a*) specify standards to be observed, practices and procedures to be followed and measures to be taken in relation to activities referred to in subsection (2);

(*b*) recommend practices and procedures that may be followed, and measures that may be taken, to further the achievement of the standards referred to in paragraph (*a*);

(*c*) regulate, restrict or prohibit any act or thing that is involved in or related to an activity referred to in subsection (2);

(*d*) make provision for or in relation to the granting, issuing or giving of a licence, permit, authority or approval and the terms or conditions to which it is subject.