Authorisation

Title:
Lucas Heights Emergency Evacuation Sub Plan

Authority to Plan:
The Lucas Heights Emergency Evacuation Sub Plan has been prepared by the Georges River District Emergency Management Committee in compliance with the State Emergency and Rescue Management Act, 1989 (as amended).

Approved:

Chairperson
Georges River District Emergency Management Committee
Date: 12-10-5

Endorsed:

Chairperson
State Emergency Management Committee
Date: 17 November 2005
Lucas Heights Emergency Evacuation Sub Plan November 2005

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Amendments

Suggested amendments or additions to this plan are to be forwarded in writing to the:

Georges River District Emergency Management Officer
NSW Police
Inner Metropolitan Region
Level 7, 151-241 Goulburn Street
Surry Hills NSW 2010

Attention: The Chairperson, Georges River District Emergency Management Committee

Amendments or additions must be authorised by the District Emergency Management Committee and endorsed by the State Emergency Management Committee prior to inclusion.

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| Original Issue | November 2005 |   |   |
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<tr>
<td>Held by the District Emergency Management Officer (DEMO)</td>
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</table>
Definitions

Some definitions used in this plan are derived from the NSW State Disaster Plan (State Displan) and the State Emergency and Rescue Management Act, 1989 (as amended).

Absorbed Dose

means the energy imparted by ionising radiation per unit mass of irradiated material. The unit of absorbed dose is the Gray (Gy) {Source: The Health Physics and Radiological Health Handbook}.

Act

means the State Emergency and Rescue Management Act, 1989 (as amended) {Source: SERM Act}.

Agency

means a government agency or a non-government agency {Source: SERM Act}.

Avertable Dose

means the dose to be saved by a protective action; that is, the difference between the dose to be expected with the protective action and that to be expected without it {Source: IAEA Basic Safety Standard – Safety Series No. 115}.

Buffer Zone

is an area in which no permanent residential accommodation is allowed {Source: NSW Health Strategy for Off-site Iodine Distribution}. This is approximately 1.6 km radius from the reactor.

Control

means the overall direction of the activities, agencies or individuals concerned {Source: SERM Act}. Control operates horizontally across all agencies/organisations, functions and individuals. Situations are controlled.

Coordination

means the bringing together of agencies and individuals to ensure effective emergency or rescue management, but does not include the control of agencies and individuals by direction {Source SERM Act}.

Defence-in-Depth

means the application of more than a single protective measure for a given safety objective such that the objective is achieved even if one of the protective measures fail {Source: IAEA - Basic Safety Standards}. 
Deterministic Effect

means a radiation effect for which generally a threshold level of dose exists above which the severity of the effect is greater for a higher dose {Source: IAEA Basic Safety Standard – Safety Series No. 115}.

Displan

means a disaster plan established by an emergency management committee, as constituted under the Act. A Displan can be established at State, District and Local Level. The object of a Displan is to ensure the coordinated response to emergencies by all agencies having responsibilities and functions in emergencies.

District Emergency Management Committee (DEMC)

means the Committee, constituted under the State Emergency and Rescue Management Act 1989 (as amended), which at District level is responsible for preparing plans in relation to the prevention of, preparation for, response to and recovery from emergencies in the District (District Displan), for which it is constituted. In the exercise of its functions, any such committee is responsible to the State Emergency Management Committee (SEMC) (Source: SERM Act). For the purpose of this plan, a reference to DEMC means the Georges River DEMC.

District Emergency Management Officer (DEMO)

means a person appointed, under the Act, as principal executive officer to the DEMC and the DEOCON.

District Emergency Operations Controller (DEOCON)

means the Commissioner of Police is to appoint a District Emergency Operations Controller for each district who is to be a police officer holding the position of Region Commander (Source: SERM Act).

Disaster Victim Registration (DVR)

means a process where the names and contact details of persons, who are displaced from their usual home/locale, because of an emergency, are registered. Its function is to account for those persons’ whereabouts, obtain their intended destination and, if consent is given, to inform others who may make inquiries as to the displaced persons location, destination or contact details.
Emergency

means an emergency due to the actual or imminent occurrence (such as fire, flood, storm, earthquake, explosion, terrorist act, accident, epidemic or warlike action) which:

a) endangers, or threatens to endanger, the safety or health of persons or animals in the State; or

b) destroys or damages, or threatens to destroy or damage, any property in the State,

being an emergency which requires a significant and co-ordinated response.

For the purposes of the definition of emergency, property in the State includes any part of the environment of the State. Accordingly, a reference in the Act to:

a) threats or danger to property includes a reference to threats or danger to the environment, and

b) the protection of property includes a reference to the protection of the environment {Source: SERM Act}.

Emergency Operations Centre (EOC)

means a centre established at State, District or Local level as a centre of communication and as a centre for the coordination of operations and support during an emergency {Source: SERM Act}.

Emergency Service Organisation

means the NSW Police, NSW Fire Brigades, NSW Rural Fire Service, NSW Ambulance Service, NSW State Emergency Service, Volunteer Rescue Association or any other agency which manages or controls an accredited rescue unit {Source: SERM Act}.

Evacuation

is a risk management strategy that may be used as a means of lessening the effects of an emergency or impact event on a community. It functions by removing people from the effects of an event, using distance as a protective measure. The following stages form the evacuation process:

a) Decision to evacuate

b) Warning

c) Withdrawal

d) Shelter

e) Return
Evacuation/Assembly Centre

means a facility/area/centre to which persons are directed to go immediately upon being evacuated from their homes/locale where they may stay for a short time before returning to their homes, or proceeding to a Welfare Centre for a longer stay, or to have their longer term needs met. An evacuation/assembly centre may also be the venue for Disaster Victim Registration (DVR), triage and/or the meeting of immediate needs of evacuated persons.

Evacuation Zone (EZ)

in this plan, is an area approximating a 3 kilometre radius from the LHSTC as defined under additional Safety Element No 2 of the NSW Health Strategy for Off-site Iodine Distribution. It is a combination of the Buffer Zone and the Urgent Protective Action Zone (UPZ).

Functional Area Coordinator

in this plan means, the nominated co-ordinator of a Functional Area tasked to coordinate the provision of Functional Area support and resources for emergency response and recovery operations, who, by agreement of Participating and Supporting Organisations within the Functional Area, has the authority to commit the resources of those organisations (Source: State Displan).

Gray (Gy)

see - Milligray

Group of Primary Interest (GPI)

means the elements within the community that are considered the most at risk group with respect to the recommended generic intervention level of 10 milliGray (mGy) avertable dose to the thyroid. Those elements are:

a) neonates and children to 3 years of age , pregnant and lactating women;

b) children between 3 and 12 years of age;

c) adolescents between 13 and 18 years of age.

Iodine Prophylaxis

means an iodine compound, in tablet or aqueous form, recommended for protection against exposure to radioactive iodine by reducing the uptake of iodine radioisotopes by the thyroid gland by way of ingestion or inhalation. It is also referred to as Stable Iodine or Inactive Iodine.

Joint Media Information Centre (JMIC)

in this plan, means a centre established by a combat agency or emergency operations controller consisting of media officers from the main participating organisations of a multi-agency operation.
Liaison Officer

In this plan, means a person nominated or appointed by an organisation or functional area to represent that organisation or functional area at a control point, emergency operations centre or coordination centre. A liaison officer maintains communications with, conveys directions and requests to their organisation or functional area, and provides advice on the status, capabilities, actions and requirements of their organisation or functional area. A liaison officer must have the authority to commit the resources of their organisation or functional area.

Local Emergency Management Committee (LEMC)

means the committee, constituted under the State Emergency and Rescue Management Act 1989 (as amended) for each local government area, and is responsible for the preparation of plans in relation to the prevention of, preparation for, response to and recovery from emergencies in the local government area (Local Displan), for which it is constituted. In the exercise of its functions, any such committee is responsible to the relevant District Emergency Management Committee (DEMC) (Source: SERM Act). For the purpose of this plan, a reference to LEMC means the Sutherland LEMC.

Local Emergency Management Officer (LEMO)

means a person appointed, under the Act, as principal executive officer to a LEMC.

MilliGray (mGy)

is an absorbed dose measured in Grays (Gy). The milliGray (mGy) is more commonly used. One Gray corresponds to one joule of radiation energy deposited in one kilogram of matter (Source: NSW Health Strategy for Off-site Iodine Distribution).

Off-Site

is the area outside of the LHSTC outer perimeter security fence.

On-Site

is the area contained within the LHSTC outer perimeter security fence.

Precautionary Action Zone (PAZ)

in this plan, is the LHSTC together with the construction site for the replacement research reactor. The PAZ is a predesignated area around a facility where urgent protective actions have been preplanned and will be implemented immediately upon declaration of a general emergency. The goal is to substantially reduce the risk of deterministic health effects by taking protective action before a release (Source: ARPANSA Technical Report 136 – May 2004).

Preparation

in relation to an emergency includes arrangements or plans to deal with an emergency or the effects of an emergency (Source: SERM Act).
Prevention

in relation to an emergency includes the identification of hazards, the assessment of threats to life and property and the taking of measures to reduce potential loss to life and property (Source: SERM Act).

Protective Measures

are measures designed to ensure that the radiation dose to individuals or to a collective population are minimised.

Recovery

in relation to an emergency includes the process of returning an affected community to its proper level of functioning after an emergency (Source: SERM Act). This includes the welfare of affected persons as well as the physical reconstruction of the community.

Responder

in this plan, means persons officially engaged in operational efforts. This includes personnel from emergency service organisations, functional area agencies and other participating or supporting agencies.

Response

in relation to an emergency includes the process of combating an emergency and of providing immediate relief for persons affected by an emergency (Source: SERM Act).

Self-evacuation

means a situation where persons, who have been advised or instructed to evacuate, have their own means of transportation and require no further assistance to move away from the area being evacuated.

Standard Emergency Warning Signal (SEWS)

means a distinctive series of audible tones used, in emergencies, before a broadcast media announcement to alert a listener that an important announcement or information is about to be broadcast.

Staging Area

means a prearranged, strategically placed area where support response personnel, vehicles and other equipment can be held in readiness for use during an emergency.

State Emergency Management Committee (SEMC)

means the committee constituted under the State Emergency and Rescue Management Act, 1989 (as amended), as the principal committee established under this Act for the purposes of emergency management throughout the State, and, in particular, is responsible for emergency planning at a State level (Source: SERM Act).
State Emergency Operations Controller (SEOCON)

means the person appointed by the Governor, on the recommendation of the Minister, responsible, in the event of an emergency which affects more than one district, for controlling the allocation of resources in response to the emergency {Source: SERM Act}.

Sub Plan

In this plan, means an action plan required for a specific hazard, critical task or special event. It is prepared when the management arrangements necessary to deal with the effects of the hazard, or the critical task or special event differ from the general coordination arrangements set out in the main or supporting plans for the area {Source: State Displan}.

Urgent Protective Action (Planning) Zone (UPZ)

in this plan, is the area extending out from the Precautionary Action Zone to a radius of 3 kilometres {referenced as ANSTO site Zone 2 on the map, Current Proposed Zoning Buffers, in the NSW Health Strategy for Off-site Iodine distribution}. The UPZ is a predesignated area around the facility where preparations are made to promptly implement urgent protective measures based on environmental monitoring. {Source: ARPANS A Technical Report 136 – May 2004}. 
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ANSTO</td>
<td>Australian Nuclear Science &amp; Technology Organisation</td>
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<td>ARPANSA</td>
<td>Australian Radiation Protection and Nuclear Safety Agency</td>
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<tr>
<td>DEMC</td>
<td>District Emergency Management Committee</td>
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<tr>
<td>DEMO</td>
<td>District Emergency Management Officer</td>
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<td>DEOC</td>
<td>District Emergency Operations Centre</td>
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<tr>
<td>DEOCON</td>
<td>District Emergency Operations Controller</td>
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<tr>
<td>Displan</td>
<td>Disaster Plan (State/District/Local)</td>
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<td>DVR</td>
<td>Disaster Victim Registration</td>
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<td>DVRCC</td>
<td>Disaster Victim Registration Coordination Centre</td>
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<tr>
<td>EOC</td>
<td>Emergency Operations Centre</td>
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<td>EZ</td>
<td>Evacuation Zone</td>
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<td>Gy</td>
<td>Gray</td>
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<tr>
<td>GPI</td>
<td>Group of Primary Interest</td>
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<tr>
<td>HIFAR</td>
<td>High Flux Australian Reactor</td>
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<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
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<tr>
<td>JMIC</td>
<td>Joint Media Information Centre</td>
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<tr>
<td>LEMC</td>
<td>Local Emergency Management Committee</td>
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<tr>
<td>LEOC</td>
<td>Local Emergency Operations Centre</td>
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<tr>
<td>LHESP</td>
<td>Lucas Heights Emergency Sub Plan (State Level)</td>
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<tr>
<td>LHSTC</td>
<td>Lucas Heights Science and Technology Centre</td>
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<tr>
<td>LLWP</td>
<td>ANSTO Local Liaison Working Party</td>
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<tr>
<td>mGy</td>
<td>MilliGray</td>
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<tr>
<td>PAZ</td>
<td>Precautionary Action Zone</td>
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<tr>
<td>PIIC</td>
<td>Public Inquiry and Information Centre</td>
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<tr>
<td>RRR</td>
<td>Replacement Research Reactor</td>
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</table>
SEMC  State Emergency Management Committee
SEOC  State Emergency Operations Centre
SEOCON  State Emergency Operations Controller
SERM Act  State Emergency and Rescue Management Act, 1989 (as amended)
SEWS  Standard Emergency Warning Signal
UPZ  Urgent Protective Action (Planning) Zone
Part 1 - Introduction

Purpose

100 The purpose of this document is to detail arrangements and tasks for effecting a controlled, coordinated and orderly evacuation of the population in the vicinity of the Lucas Heights Science and Technology Centre (LHSTC) where an event or accident causes, or has the potential to cause, an uncontrolled release of radioactive material and, in the case of such an occurrence, is:

a) likely to have off-site consequences, and
b) could reach the defined level of risk to part or all of the surrounding population.

Background

101 The LHSTC is located on New Illawarra Road, Lucas Heights in New South Wales. A nuclear reactor, commissioned in 1958, is situated within the LHSTC site. Known as the High Flux Australian Reactor (HIFAR), this reactor is a research reactor having a ten (10) megawatt thermal power output. Additionally, a replacement research reactor (RRR) of twenty (20) megawatt thermal power output is under construction 200 metres to the south-west.

102 While existing emergency management arrangements are considered appropriate, the NSW Government has decided to introduce three (3) additional safety elements, namely:

a) adopting the World Health Organisation’s (1999) recommended generic intervention level of 10 milliGray (mGy) avertable dose to the thyroid in lieu of the previous 30 mGy level for:

i) neonates (birth to 1 month of age),
ii) children (1 month to 3 years of age),
iii) children (3 to 12 years of age),
iv) adolescents (13 to 18 years of age), and
v) pregnant and lactating women;

b) extending the emergency planning zone from a 2.5 to a 3 kilometre radius from the reactor; and

c) adopting a policy of evacuating part or all of the area within that boundary.

103 The World Health Organisation’s intervention level for other adults (between 18 and 40 years of age) remains at 100 mGy avertable dose with higher levels for those over the age of 40.

104 Following the Government’s decision, the State Emergency Management Committee (SEMC) elevated emergency management planning arrangements to a State level for an event at the LHSTC involving an uncontrolled radioactive release. The SEMC
has developed a specific Sub Plan to the State Disaster Plan (State Displan) for such occurrences; namely, the Lucas Heights Emergency Sub Plan (LHESP). This plan has been developed to support the LHESP.

Scope

105 This plan relates only to arrangements for the partial or total evacuation of the Evacuation Zone (EZ) or any other area deemed necessary following a direction to evacuate, issued by State Emergency Operations Controller (SEOCON), because of an event at the LHSTC.

106 Details concerning the prevention of, preparation for, response to, and recovery from emergencies at the LHSTC are recorded, either generally or specifically, in other plans or documents.

Objectives

107 The objectives of this plan are to:

a) define roles and responsibilities for evacuation purposes;
b) set out the control, coordination and liaison arrangements;
c) detail arrangements for the acquisition and co-ordination of resources;
d) detail public warning systems and responsibility for implementation; and
e) detail arrangements for the review, testing, evaluation and maintenance of this plan.

Emergency Planning Zones

108 By international convention, emergency planning concerning off-site consequences for an area surrounding a nuclear reactor is divided into several zones, namely: a Precautionary Action Zone (PAZ), Urgent Protective Action (Planning) Zone (UPZ) and, in the case of the LHSTC, a Buffer Zone.

109 By definition:

a) The PAZ is a predesignated area around a facility where urgent protective actions have been pre-planned and will be implemented immediately upon declaration of a general emergency. The goal is to substantially reduce the risk of deterministic health effects by taking protective action before a release (Source: ARPANSA Technical Report 136 - May 2004).

b) The Buffer Zone is an area in which no permanent residential accommodation is allowed (Source: NSW Health Strategy for Off-site Iodine Distribution).

c) The UPZ is a pre-designated area around the facility where preparations are made to promptly implement urgent protective measures based on environmental monitoring (Source: ARPANSA Technical Report 136 - May 2004).
This plan holds the following emergency planning zones to mean (Source: NSW Health Strategy for Off-site Iodine Distribution), the:

a) PAZ is the LHSTC together with the construction site for the replacement research reactor \(^2\);

b) Buffer Zone is an area out to a 1.6 kilometre radius from the reactor. This zone’s circular boundary is modified to incorporate property belonging to ANSTO, which is at the end of the waste disposal road and extends approximately 500 metres to the north-northwest beyond the 1.6 kilometres into bushland \(^1\);

c) UPZ contains the area outside the LHSTC perimeter fence to a radius of 3 kilometres from the reactor \(^1\)\(^2\);

\(^1\) It is acknowledged, the distances used in this plan for the Buffer Zone and the UPZ significantly exceed those recommended by the International Atomic Energy Agency (IAEA) or those deemed acceptable by the U.S. Nuclear Regulatory Commission for similar research reactors up to 100 Megawatt thermal power output.

\(^2\) Acknowledgement is also made that the PAZ and UPZ distances exceed that recommended by ARPANSA (Source: NSW Health Strategy for Off-site Iodine Distribution).

Evacuation Zone and Response Sectors

Evacuation of persons within the PAZ is the responsibility of ANSTO.

In this plan, the term “Evacuation Zone” (EZ) means a combination of the Buffer Zone and the UPZ.

To permit a vectored approach in implementing an evacuation response, the EZ is divided into five main response sectors (Annex 1.1). These main response sectors are:

a) Lucas Heights

b) Barden Ridge - A

c) Engadine - A

d) Engadine - B

e) Engadine - C

Additionally, each main response sector is further divided into sub-sectors to allow for managing a staged warning and withdrawal process at a local level.

To account for topographic irregularities and operational practicalities, the notional 3-kilometre EZ boundary is adjusted slightly to include or exclude selected areas. Any exclusion is minimal and, generally, relates to traffic corridors at the outer rim of the EZ.
Area Profile

116 The Buffer Zone wholly contains the locality of Lucas Heights and some bushland portions in the suburbs of Engadine, Heathcote, Menai and Holsworthy. Within this zone is the LHSTC site, some small enterprises, a waste disposal depot, sections of New Illawarra and Heathcote Roads, other minor streets, dirt tracks, fire trails and portions of the Woronora River. There are no permanent dwellings nor are any permitted. The estimated business day population is between 1,000 and 1,200 persons; mainly LHSTC employees.

117 The balance of the EZ includes portions of the suburbs or localities of Barden Ridge, Engadine, North Engadine, Heathcote, Holsworthy and some navigable portions of the Woronora River with frontages to the north of the LHSTC. These locales are principally bushland with Holsworthy being a military reserve. Importantly, the outer portion of the EZ interfaces with or incorporates low density residential housing in a suburban setting with associated schools, day care centres, some convenience shops, sporting grounds, suburban thoroughfares and streets, etc. There are no medium or heavy industrial premises in the EZ or the surrounding area.

118 The residential population within the EZ is estimated to be 13,000 persons. Within this estimate, interpolations of census data (Australian Bureau of Statistic 2001) for the Sutherland Shire suggest 26% (3,400) of the population would be less than 18 years of age. An additional, 5% (650) has been added to account for pregnant and lactating females. These calculations indicate the Group of Primary Interest (GPI) as being approximately 4,000 persons.

119 The general populace has a high proportion of motor vehicle ownership. However, residents in Engadine Sectors are more likely to commute by public transport, as they are closer to rail hubs. On business days, there is a general outflow of working adults from the area. However, the daytime inflow for schools and day care centres in or near the EZ is upward of 4,000.

120 Three major arterial thoroughfares service the area. During peak periods, these thoroughfares carry moderate to heavy traffic flows. The thoroughfares are:

a) Heathcote Road (3) - the main east-west orbital route to Moorebank from the Princes Highway. It passes through the EZ for a short distance;

b) New Illawarra Road (3) - the only north-south connection from Heathcote Road between Moorebank and Heathcote. It passes through the EZ at Lucas Heights and then through to Barden Ridge to connect with Menai and Alford’s Point Roads;

c) Princes Highway - not directly impacted by the EZ. However, it is the main north-south route for the Engadine Sectors, and others traversing the Shire.

(3). Heathcote and New Illawarra Roads intersect at a point within the Buffer Zone.
Planning Assumptions

121 This plan is based on the following assumptions:

a) due to defence-in-depth (safety) systems employed at the LHSTC, the likelihood of an uncontrolled radiological release is considered remote;

b) both ANSTO (the facility operator) and ARPANSA (the Commonwealth regulatory authority) advise that an uncontrolled radiological release with off-site consequences is extremely unlikely;

c) if such an event were to occur, an instantaneous or explosive release of radioactive material immediately affecting the area is extremely improbable.

d) NSW Health advises that:

i) the likelihood of an event requiring intervention with iodine is extremely remote;

ii) deterministic effects will never be reached;

iii) the recommended generic intervention level of 100 mGy for adults will not be reached and as such, adults, other than pregnant and lactating women, will not require iodine prophylaxis, in any circumstances, outside the LHSTC;

iv) an accepted generic intervention level of 10 mGy averted dose to the thyroid in neonates, infants, children, adolescents and pregnant and lactating women could theoretically be reached but only with prolonged exposure (greater than 12 hours) very close to the source of radiation;

v) In the unlikely event of a worst case scenario where 10 mGy averted dose to the thyroid could be reached, reducing the exposure period, to less than 12 hours, and increasing the distance from the source, to greater than 3 kilometres, will obviate the need for iodine prophylaxis.

122 Prevailing weather conditions indicate, it is highly unlikely the entire EZ would ever need to be evacuated;

123 Time of day, day of the week, holidays or business/school days, meteorological conditions and other contingent factors will determine, and may affect particular evacuation strategies or influence evacuation priorities;

124 The majority of the population will have their own means of transportation. However, some elements within the population may require assistance with transportation;

125 The Public’s perception of risk needs to be taken into account in formulating evacuation strategies. For example, members of the Public outside of the area being evacuated may also wish to leave;

126 Arrangements detailed in this plan are based on the required resources being available at the time.
Related Plans and Documents

Whilst this plan is a stand-alone document, it does form part of an integrated emergency management planning regime for events at the LHSTC. Other associated plans and documents include:

a) ANSTO Research Reactor Lucas Heights - Strategy for Off-site Iodine Distribution (NSW Health - Counter Disaster Unit)
b) NSW State Disaster Plan
c) State HAZMAT Sub Plan
d) State Lucas Heights Emergency Sub Plan
e) State Disaster Recovery – Human Services Functional Area Supporting Plan
f) Georges River District Displan
g) Lucas Heights Emergency Evacuation Transport Services Operational Plan
h) Response Plan for Accidents and Incidents at ANSTO/LHSTC (ANSTO)
i) Sutherland Local Displan
j) Sutherland Police Evacuation and Traffic Management Plan
k) Botany Bay/Port Hacking Marine Emergency Sub Plan

Agencies with responsibilities under this plan may establish their own internal Standing Operating Procedures or Standard Operational Guidelines. However, those procedures and guidelines should be consistent with objectives and policies contained in this document.

Administration, Review and Testing

This plan is to be administered and reviewed by the District Emergency Management Committee (DEMC), in consultation with the ANSTO Local Liaison Working Party (LLWP). A review of this plan, or parts thereof, is to occur under the following circumstances:

a) once every two years following each endorsement (entire document);
b) with changes to relevant legislation (for affected parts);
c) with changes to existing planning parameters (for affected parts);
d) following each activation (entire document);
e) following each exercise (for the parts exercised).

The DEMC, in consultation with the LLWP and where practicable, is to arrange for the testing or exercising of this plan, or parts thereof, once every two years.
Part 2 - Roles and Responsibilities

200 This part outlines the roles and responsibilities for each of the parties involved in preparation for, and response to an activation of this plan. This includes the supply of personnel, physical resources and technical knowledge within the capabilities of each agency.

State Emergency Operations Controller (SEOCON)

201 Is responsible for:

a) issuing a direction to evacuate areas within the EZ at risk of radiation exposure;

b) nominating the area to be evacuated.

District Emergency Operations Controller (DEOCON)

202 The DEOCON is responsible for:

a) controlling the evacuation of areas nominated by the SEOCON.

Georges River District Emergency Management Committee (DEMC)

203 Is responsible for:

a) developing a plan for an evacuation of the Evacuation Zone;

b) developing warning systems;

c) establishing a Lucas Heights Public Education Sub Committee, as and when required.

Agriculture and Animal Services Functional Area

204 Is tasked with:

a) providing holding facilities for pets and companion animals including evacuation centres;

b) providing animal care services for wildlife, domestic animals and companion animals evacuated or retrieved from the affected area.

Ambulance Service of NSW

205 Is tasked with:

a) providing pre-hospital care and transport for the sick and injured within the EZ;

b) undertaking other duties, as directed by the State Health Services Functional Area Coordinator.
ANSTO

206 Is tasked with:
   a) providing ongoing advice to the DEOCON on the nature and level of any radioactivity beyond the LHSTC;
   b) providing a liaison officer at an EOC, at the request of the DEOCON.

ARPANSA

207 Is tasked with:
   a) providing independent ongoing advice to the DEOCON on the nature of any risk of radioactivity beyond the LHSTC;
   b) providing a liaison officer at an EOC, at the request of the DEOCON.

Bureau of Meteorology (BoM)

208 Is tasked with:
   a) providing timely meteorological information and advice to the DEOCON;
   b) providing a liaison officer at an EOC, at the request of the DEOCON.

Department of Education and Training

209 Is tasked with:
   a) ensuring the management at each public education facility within the EZ is aware of this plan;
   b) ensuring the management of each of those facilities is reasonably prepared for an evacuation;
   c) managing the evacuation of their students, when directed to do so;
   d) providing an adequate quantity of teachers, as can reasonably be expected, at evacuation centres to supervise students until other arrangements are in place;
   e) managing the needs of students who may reside in an affected area but are in attendance at a school outside the evacuated area at the time of an occurrence;
   f) providing a liaison officer at an EOC, at the request of the DEOCON.
Disaster Recovery - Human Services Functional Area

210 Is tasked with:

a) with assistance from Sutherland Shire Council, maintaining a register of and contact details for all schools, day care centres and similar vulnerable facilities within the EZ;

b) with assistance from Sutherland Shire Council, identifying evacuation centres capable of processing or accommodating the total population from within the EZ;

c) maintaining a register of, and contact details for evacuation centres;

d) establishing and managing evacuation centres, as required;

e) providing welfare support, as required.

Health Services Functional Area

211 Is tasked with:

a) identifying any health care facilities within the EZ and maintaining a register of the same;

b) ensuring the management at each of those facilities is aware of this plan;

c) ensuring the management of each of those facilities is reasonably prepared for an evacuation;

d) supplying and administering iodine prophylaxis at evacuation centres, if directed to do so by the State Health Services Functional Area Coordinator;

e) supplying and administering iodine prophylaxis to responders entering the EZ, if directed to do so by the State Health Services Functional Area Coordinator;

f) arranging for first aid and mental health support at evacuation centres.

Local Liaison Working Party (LLWP)

212 The LLWP is a planning committee with no operational role. It is tasked with:

a) assisting the Lucas Heights Public Education Sub Committee to develop a public education program;

b) promoting awareness of the Lucas Heights Emergency Evacuation Plan in consultation with the Lucas Heights Public Education Sub Committee;

c) reporting to the DEMC;

d) ensuring liaison occurs between relevant Commonwealth and State agencies.
NSW Fire Brigades
213 Is tasked with:
   a) facilitating tasks outlined in associated plans;
   b) assisting the DEOCON and Police, as required;
   c) monitoring, assessing and providing decontamination facilities, as required.

NSW Police
214 Is tasked with:
   a) assisting the DEOCON, as required;
   b) identifying, implementing and maintaining traffic management strategies in conjunction with the Roads & Traffic Authority,
      i) in particular, controlling traffic on New Illawarra Road, Heathcote Road and the Princes Highway;
   d) identifying, implementing and maintaining crowd control strategies;
   e) delivering warnings;
   f) assisting in evacuating areas within the EZ;
   g) securing evacuated areas;
   h) establishing and controlling Disaster Victim Registration (DVR) processes;
   i) requesting activation of the Disaster Victim Registration Coordination Centre (DVRCC) and Public Inquiry and Information Centre (PIIC), if required.

NSW Rural Fire Service
215 Is tasked with:
   a) assisting in evacuating areas within the EZ;
   b) assisting the DEOCON and Police, as required.

NSW State Emergency Service
216 Is tasked with:
   a) assisting in evacuating areas within the EZ;
   b) assisting the DEOCON and Police, as required.
Public Information Services Functional Area

217 Is tasked with:

a) assisting in the development of the warning systems;
b) coordinating the delivery of warnings and public information via media outlets;
c) establishing a Joint Media Information Centre (JMIC), if required;
d) assist with the development and implementation of a Lucas Heights Public Education program.

Sutherland Shire Council

218 Is tasked with:

a) assisting the Disaster Recovery - Human Services Functional Area with the identification of schools, day care centres and similar vulnerable facilities in the EZ;
b) assisting the Disaster Recovery - Human Services Functional Area with the identification of evacuation centres capable of processing or accommodating the total population from within the EZ;
c) assisting in the management of evacuation centres, where such facilities are operated by council, if requested to do so by the District Disaster Recovery - Human Services Functional Area Coordinator;
d) assisting in the development and delivery of the Lucas Heights Public Education program for the area;
e) assisting in warning residents that an evacuation is required.

Transport Services Functional Area

219 Is tasked with:

a) providing transportation for evacuees who are unable to self-evacuate;
b) providing other transportation needs, as required.
Part 3 - Control, Coordination and Communications

Concept of Operations

300 This plan is based on the orderly evacuation of that portion of the EZ, which could be at risk of receiving a radiation dose (avertable) to the thyroid in excess of 10mGy. Priority for evacuation will be given to those under 18 years of age and pregnant or lactating women.

Control

301 The DEOCON is to have overall control including determining priorities for the deployment of resources within or allocated to the District.

Coordination

302 Coordination of any evacuation will be carried out from the District Emergency Operations Centre (DEOC); or any other location, if deemed appropriate.

303 Agencies will establish their own operations or coordination centres for the management of their agency’s resources. The DEOCON is to be notified of the activation and the location of such centres and, if activated, of their intended closure.

Communications

304 The EOC will have telephone and facsimile communications facilities. Agencies will use their own communications systems for communicating with their resources in the field. Liaison officers may need their own equipment to monitor their agency’s communications network.

305 During any evacuation, the DEOCON is to be informed of any major deficiency in operational communications, where that deficiency cannot be readily rectified by the agency responsible.

Liaison Officers

306 If requested, agencies are to provide a liaison officer to an EOC or other locations as deemed necessary by the DEOCON.

Arrangements for Seeking Out-of-Area Resources

307 Agencies may obtain out-of-area resources from within their own organisations, or from other agencies where there are inter-agency understandings or agreements for the provision of assistance. The DEOCON is to be advised of such actions where those resources or that assistance is to be deployed for operations being conducted under this plan or where such deployment may have an impact on those operations.

308 Requests for resources not available to an agency will be referred to the EOC. Should a resource not be available at district level, requests for the required resource will be referred to the State Emergency Operations Centre (SEOC).
Part 4 - Evacuation Response

Activation Sequence

400 The activation sequence for this plan is set out below.

Alert & Standby

401 DEOCN receives notification, from the SEOCON, of an event or accident at the LHSTC causing, or having the potential to cause, an uncontrolled release of radioactive material. The DEOCN will:
   a) inform relevant district and local level agencies and the District Emergency Management Officer;
   b) inform the Police Commanders for Sutherland, Miranda, Hurstville, St. George, Bankstown, Liverpool and Sans Souci Water Police;
   c) activate the EOC to a monitoring level;
   d) monitor the situation;
   e) liaise with other relevant DEOCNs.

402 DEOCN receives advice there is a risk of off-site consequences. The DEOCN will:
   a) advise each agency to ready their resources for deployment or, where appropriate, authorise pre-deployment of resources;
   b) upgrade the EOC to operational level;
   c) call for liaison officers to report to the EOC, as required;
   d) monitor the situation.

Callout

403 DEOCN receives a direction from SEOCON to evacuate nominated areas. The DEOCN will:
   a) determine the priority of tasks based on information and intelligence supplied;
   b) authorise agencies to commence deployment within their agreed roles or assigned tasks;
   c) authorise any subsequent issuing or broadcasting of public warnings;
   d) monitor the withdrawal, shelter and return stages of the evacuation.
Stand Down

404 DEOCON, in consultation with SEOCON, will determine when Stand Down is appropriate. DEOCON will then:

a) notify liaison officers, relevant DEOCONs and Police Commanders;

b) close the EOC.

Debrief

405 Following an operation, DEOCON will nominate a time and location for a district level debriefing involving representatives from each agency and functional area.

406 Individual agencies and functional areas are to conduct internal debriefings before the nominated district level debrief date and prepare a report for submission at that debriefing.

Authority to Evacuate, Take Other Steps & Safety Measures

407 Powers of police to evacuate, to take other steps concerning persons or to take other safety measures are contained in Section 60L and 61 of the Act. A declaration of a State of Emergency is not required to execute these powers.

Responder Exposure Controls

408 All agencies are to establish internal procedures and processes to manage radiological exposure to their personnel. Each agency should seek advice from relevant health authorities on what precautions and control measures can be taken. At the minimum, all agencies are to ensure those controls include instructions for:

a) personnel not to enter or remain in the EZ, once an evacuation direction has been issued if they -

   i) are under the age of 18 years of age or,

   ii) suspect they are pregnant, are pregnant or lactating;

b) documenting the length of time individual responders spend in the EZ and their approximate locations during those times;

c) regular rotation of personnel in the EZ based on advice from health authorities.

409 Iodine prophylaxis, as a countermeasure, is not an anti-radiation medication. It only helps protect a person’s thyroid gland by reducing its uptake of radioactive Iodine. If necessary and on advice from the State Health Services Functional Area Coordinator, iodine prophylaxis may be issued to responders operating in the EZ during an evacuation.
Evacuation Response Priorities

410 Several factors will influence response priorities. These factors include predicted weather conditions, time of day, day of week, etc. However, some pre-determined priorities are:

Lucas Heights Sector

a) because of the Buffer Zone's proximity to the potential source of risk, consideration should be given to the removal of all non-essential persons, from this area, relatively quickly upon receiving notification of an event with potential off-site consequences;

Group of Primary Interest (GPI)

b) evacuation of sectors within the EZ is subject to a decision based on environmental monitoring and predictions of likely consequences. The results of that monitoring and advice from several relevant agencies will determine if there actually is a need for an evacuation;

c) planning assumptions in this document indicate there may not be a need to evacuate adults from the EZ. However, there is an expectation that many adults will wish to evacuate the area in any event;

d) nonetheless, the following are to be given precedence throughout the warning and withdrawal phases. In order of priority, the Group comprises of -

i) neonates and children to 3 years of age, pregnant and lactating women,

ii) children between 3 and 12 years of age,

iii) adolescents between 13 and 18 years of age;

e) evacuation operations will target concentrations of persons in the GPI over the general adult population, such as -

i) day care centres (Annex 2.1),

ii) schools (Annex 2.2),

iii) outdoor recreational facilities (Annex 2.3).

411 Consideration may also need to be given to out-of-session activities being conducted at day care centres, schools and outdoor recreational facilities. This may require physical attendance by emergency service personnel to confirm if any persons are present.
Sector Control Points

Police may establish a Sector Control Point for each sector, or combinations thereof, to manage ground-level activities within that area. If such a facility is established, the EOC is to be advised of the exact location of each Sector Control Point, the contact details of the Officer-in-Charge (Sector Controller) for the sector, or sectors, and any subsequent movement or its closure.

Agencies providing support within an evacuating sector will establish liaison officers at a Sector Control Point, if established, to better effect ground-level tasking arrangements. Functions executed at this level may include, but are not limited to:

a) field team assembly, briefings and debriefings;

b) localised traffic control assignments, in conjunction with the EOC and in accordance with Sutherland Police's Traffic Management and Evacuation Plan;

c) perimeter control assignments, in conjunction with the EOC;

d) sector clearance tasks and clearance confirmation arrangements;

e) general area security patrols;

f) provision of regular situation reports to the EOC.

Staging Areas

Additional resources are to be staged rearward and only brought forward on instruction or when given specific tasks. The location of any staging area/s will be determined at the time in consultation with relevant liaison officers and with due consideration given to meteorological conditions. Appointment of an appropriate senior emergency services officer to manage any such area/s is also to be given due consideration.

Traffic Management

Local traffic management arrangements are to concentrate on facilitating egress from evacuating sectors while still allowing access to the area by responders. Specific local traffic management arrangements are contained in the Sutherland Police’s Traffic Management and Evacuation Plan (ANSTO Section).

Regional traffic management arrangements are effected by prepared arrangements with the NSW Police at regional level, the Roads and Traffic Authority and the Traffic Management Centre.

Generally, access to areas outside the EZ should not be prevented unless otherwise directed or where it may interfere with evacuee egress and/or responder access.
Warning Stage

418 Initial evacuation warnings to the Public or advice not to evacuate will be authorised by the SEOCON. Subsequent warnings are to be authorised by the DEOCON. Delivery of warnings may be implemented by such notification mechanisms as are deemed appropriate at the time, for example:

a) telephone contact;
b) premises by premises attendance (doorknocks);
c) mobile public address systems and vehicle mounted sirens;
d) broadcast media (radio and television media outlets).

419 The Public Information Services Functional Area Coordinator is to coordinate warnings and public information disseminated via media outlets.

420 The DEOCON is to be informed when and if the JMIC, PIIC or DVRCC are activated and operational. Those facilities are also to receive copies of any warnings and advice given to the Public.

Standard Emergency Warning Signal (SEWS)

421 The SEWS is be used in conjunction with any public warnings transmitted via broadcast media outlets. Use of this signal is to be coordinated via the Public Information Services Functional Area Coordinator/Liaison Officer.

Warnings Delivered in Person

422 Emergency service personnel delivering warnings in person are to wear agency uniform or identification tabards, where possible. However, all emergency service personnel performing this task must carry appropriate photo-identification as authorised by their agency.

Lucas Heights Sector

423 There are specific warning responsibilities for this sector, namely:

a) ANSTO personnel will deliver, in the first instance of any event, warnings to the following facilities on the south-eastern side of New Illawarra Rd. Those facilities are the:

   i) Motel;
   ii) Cafeteria;
   iii) Gun Club.

b) NSW Police will arrange for the delivery of warnings to the following:

   i) Waste Disposal Facility;
   ii) Mini Bike Club (at the entrance of the Waste Disposal Facility);
   iii) Holsworthy Military Base;
   iv) Members of the Public using roads, tracks and any Woronora River frontages in this area.
Day Care Centres, Schools and Outdoor Recreational Facilities

424 When in session, day care centres, schools and outdoor recreational facilities (Annex 2.1, 2.2 & 2.3) are to receive priority. An officer giving a warning to any such facility will:

a) state their name and office;
b) inquire as to the approximate number of persons who may need assisted transportation and approximately how many of that number require special assistance;
c) provide an estimated time of arrival for initial transportation resources, where possible;
d) provide the name and location of any assigned evacuation centre;
e) provide a contact telephone number for confirmation, if applicable.

General Public

425 Specific delivery mechanisms will dictate the quantitative and qualitative content of warning messages. The following information, advice and instructions are to be included in warning messages:

a) areas to which warnings are to apply;
b) location of evacuations centres for each sector being evacuated;
c) encouragement to use personal transportation (self-evacuate);
d) advice that buses will use bus stops, along regular bus routes in the evacuating sector, as collection points for persons without personal transportation;
e) details of special contact numbers for people to call if they require fully assisted transport (eg disabled, infirmed, elderly, etc).
Withdrawal Stage

Lucas Heights Sector

426 Initial wind direction may determine the direction of egress from the southern part of
the Lucas Heights Sector, which can only be facilitated via New Illawarra Road.
Considerations for this sector are:

a) egress route preference is north along New Illawarra Road;

b) a small number of buses may be assigned to provide assisted transportation, if necessary;

c) perimeter and traffic control points may be withdrawn rearward once this sector is cleared of non-essential personnel and the Public.

Day Care Centres, Schools and Outdoor Recreational Facilities

427 If an evacuation is authorised:

a) police are to be assigned to each school for evacuation control and crowd management;

b) entire day care centre and school populations are to be directed or transported to nominated evacuation centres for DVR and parental collection;

c) outdoor recreational facilities will need to be managed on a case by case basis;

d) buses will be specifically assigned to facilities requiring assisted transportation.

General Considerations

428 Self-evacuation is the preferred strategy;

a) orderly and timely self-evacuation is to be encouraged;

b) self-evacuees are to be encouraged to attend their nominated evacuation centre for DVR before proceeding to alternate accommodation. DVR is not mandatory;

c) buses will provide assisted transportation to the general population by using bus stops, as pick-up points, along regular bus routes;

d) police are to patrol egress and access routes for traffic management purposes;

e) police or emergency services are to patrol bus routes for evacuation management purposes and, if necessary, the Woronora River frontages.

429 Persons with special needs (eg disabled, infirmed or elderly) who require transportation assistance are likely to be identified during warning and withdrawal stages.
Shelter Stage

430 The preferred evacuation centre activation strategy is for a lesser number of evacuation centres with greater capacities to facilitate a concentrated effort by responding agencies.

431 Evacuation centres are identified under Local Displan arrangements. Centres listed (Annex 2.4) are for emergency planning preferences only and may be varied depending on circumstances.

Evacuation Centre Activation

432 Activation of a listed evacuation centre is to be authorised by the District Disaster Recovery - Human Services Functional Area Coordinator.

433 If further sheltering resources are required, the District Disaster Recovery - Human Services Functional Area Coordinator will determine and nominate suitable facilities.

Specific Notification Requirements

434 Once an evacuation centre is activated, the DEOCON is to be advised.

435 Upon advice regarding the activation of an evacuation centre; the name, location and capacity of the centre is the be, in the first instance, disseminated to the:

a) Police Liaison Officer, who will also inform,
   i) Sector Controllers,
   ii) Public Inquiry and Information Centre Coordinator, if activated,
   iii) Disaster Victim Registration Coordination Centre Coordinator, if activated;

b) District Transport Services Functional Area Coordinator/liaison officer;

c) District Health Services Functional Area Coordinator/liaison officer;

d) Agricultural and Animal Services Functional Area Coordinator/liaison officer;

e) Public Information Services Functional Area liaison officer, who will also inform the,
   i) Joint Media Information Centre, if established,
   ii) Public Information Services Functional Area Coordinator;

f) State Emergency Operations Centre.

436 Evacuation centre managers are to provide regular situation reports to District Disaster Recovery - Human Services Functional Area Coordinator/liaison officer on the status of their centre.
Return Stage

437 SEOCON in consultation with Department of Environment and Conservation, the DEOCON, ANSTO and ARPANSA will advise the Public that it is safe to return. A public information program will be implemented to advise the Public of any issues associated with returning.

438 The return of evacuees will require the same considerations and coordination as the original evacuation, such as:

   a) staggering the return;
   b) providing transport assistance for evacuees who require it;
   c) traffic management.

439 While fewer resources are expected to be required during this stage, a staggered reduction of support services will be required to ensure continuous management of the entire process.
Part 5 - Appendices

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  - Evacuation Sectors Overview
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