Mt Walton integrated waste disposal facility
Environmental Management Programmes

Health Department of Western Australia

1. Proposed disposal of radioactive waste at remote site
2. Transport and storage of wastes at the integrated waste storage facility east of Mt Walton
3. Integrated waste storage facility access road to Mt Walton East

Evaluation by the Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia
Bulletin 571
August 1991

Mt Walton integrated waste disposal facility Environmental Management Programmes

Health Department of Western Australia

1. Proposed disposal of radioactive waste at remote site
2. Transport and storage of wastes at the integrated waste storage facility east of Mt Walton
3. Integrated waste storage facility access road to Mt Walton East

Evaluation by the Environmental Protection Authority

ISBN. 0 7309 3575 2
ISSN. 1030 - 0120

Contents

Figures

Appendices

Summary

The Environmental Protection Authority concludes that the proposal by the Health Department of Western Australia, to transport and store waste east of Mt Walton (as outlined in the three Environmental Management Programmes subject to public scrutiny), is environmentally acceptable.

Given the low acute toxicity of polychlorinated biphenyls, and the high integrity of containment of polychlorinated biphenyls (PCBs), organochlorine pesticide wastes, and radioactive waste, the small quantities of waste involved, and the specific transport and emergency response measures proposed by the Health Department, the Authority considers that road transport is sufficiently safe for these materials.

The Authority also considers that all of the three possible access routes to the site are environmentally acceptable, given the low level of disturbance involved.

The Environmental Protection Authority considers that the method of disposal proposed for the radioactive waste is environmentally acceptable, as is the method of storage of organochlorines (PCBs and pesticides). The management measures proposed by the Health Department are environmentally acceptable.

The Authority considers that all operations associated with the radioactive waste should be carried out to the satisfaction of the Radiological Council.

1. Introduction

In 1988 the Health Department of Western Australia proposed an integrated waste disposal facility, to be located east of Mt Walton. The site is approximately 75 kilometres north east of Koolyanobbing. The facility was to dispose of low level radioactive waste from a proposed rare earths processing plant, and to dispose of polychorinated biphenyls (PCBs) and other organochlorine wastes, such as pesticides, by high temperature incineration. The Environmental Protection Authority assessed the proposal at Public Environmental Review level, and found the proposal to be environmentally acceptable, subject to certain safeguards (EPA Bulletin 353).

The Minister for the Environment subsequently approved and set Environmental Conditions on the project (Appendix 1). The Environmental Conditions require that specific aspects of the project need to be described in Environmental Management Programmes, which are to be available for public review. The Environmental Management Programmes are to be to the satisfaction of the Environmental Protection Authority (see Appendix 1).

Three Environmental Management Programmes have been developed by the Health Department and each has been released for public review for six weeks. They are:

1. "Proposed Disposal of Radioactive Waste at Remote Site" (released 9 October 1989 to 17 November 1989);
2. "Transport and Storage of Wastes at the Integrated Waste Storage Facility East of Mt Walton" (released 27 May to 5 July 1991); and
3. "Integrated Waste Storage Facility Access Road to Mount Walton East" (released 27 May to 5 July 1991).

The Environmental Protection Authority had not previously released its assessment for radioactive waste, as Rhone Poulenc Pty Ltd, the company which would have been the principal source of the low level radioactive waste, withdrew their proposal for rare earth processing in early 1990. Many of the issues raised in that early proposal are thus no longer relevant.

In this report, the Authority will address transport and disposal of wastes. The discussion will be organised by issues, rather than by Environmental Management Programme. The Authority also outlines principles for any future proposals for transport and disposal options for low level radioactive wastes at Mt Walton.

As these Environmental Management Programmes are required to be to the satisfaction of the Environmental Protection Authority, this is a report on fulfilment of Ministerial Conditions, and is not subject to appeal under the Environmental Protection Act. However, the previous Environmental Conditions set by the Minister for the Environment imply, but do not require, rail transport. The Minister has requested the Environmental Protection Authority to advise him on the advisability of changing those conditions, and that advice has been released in a separate report (EPA Bulletin 572).

2. Proposals for intractable waste management in WA

A Public Environmental Report proposing the incineration of PCBs was submitted by the Health Department to the Environmental Protection Authority in 1987. Whilst the Authority recommended that the proposal was environmentally acceptable, the project did not proceed. As noted above, the Health Department developed a proposal for an "integrated waste disposal facility" north of Koolyanobbing in 1988. This proposal was to manage the disposal of low level radioactive waste (from the proposed Rhone Poulenc rare earth treatment plant, to be located at Pinjarra), and to incinerate "organochlorine" wastes, which included certain pesticides and possible organochlorine waste streams from major industries (such as the proposed petrochemical project).

During the public review phase for that proposal, interaction with the community led to the consideration of further sites east of Mt Walton. The Authority also found this (revised) proposal to be environmentally acceptable, provided that the details of the project should be developed in Environmental Management Programmes, which would be subject to further public review.

The proposal is to develop a facility east of Mt Walton where low level radioactive wastes will be disposed of, and which caters for the storage of organochlorine wastes.

The Health Department wishes to get all approvals for the Mt Walton site in place in order that the facility may be utilised if wastes become available. The Health Department recognises that other options for the disposal of organochlorines may be pursued by other parties.

The specifics of the proposal have changed as the potential for various waste streams has changed, and as the possibility of utilising high temperature facilities outside of Western Australia has occurred. The Environmental Protection Authority does not consider that such changes alter the basis of this project. The Authority will assess any future environmentally significant proposals associated with the Mt Walton East site (for example, new waste streams) following public review.

3. The proposal

3.1 The Mount Walton East site

The site for the facility is located approximately 75 kilometres north of Jaurdi siding, and 80 kilometres north east of Koolyanobbing. The site characteristics are described in detail in the first of the Environmental Management Programmes and associated studies released in 1989.

The site will be fenced. A site manager will be appointed, who will supervise all operations at the site. The manager will also be responsible for periodic inspections once the wastes are in place.

The supplement to the first Environmental Management Programme described studies relating to a drilling program, and a flora and fauna survey. A survey relating to Aboriginal sites was forwarded to the Western Australian Museum. The Museum have informed the Authority that there are no significant sites in the areas considered.

3.2 Access to the site

The third Environmental Management Programme outlines the currently proposed access route to the site, to the east of the Timberfields (or Jaurdi) pastoral lease, managed by the Department of Conservation and Land Management. This route was developed by the Health Department following discussions with the Department of Conservation and Land Management after the release of the first Environmental Management Programme. The Health Department have established a "trace" (a precursor to a road) from the Great Eastern Highway at Boorabbin, northwards to the proposed site (see Figure 1).

3.3 Types and quantities of waste

The first Environmental Management Programme described the transport and disposal of low level radioactive thorium hydroxide waste from the proposed Rhone Poulenc rare earths facility, which was to have been located near Pinjarra. The waste was to have been disposed of in a shallow burial facility. The quantity of thorium hydroxide waste was expected to be 7000 tonnes per annum for at least 20 years. The document also envisaged that radioactive wastes sourced from existing industries in Western Australia, and wastes currently held in the hospital system would be disposed of at Mt Walton.

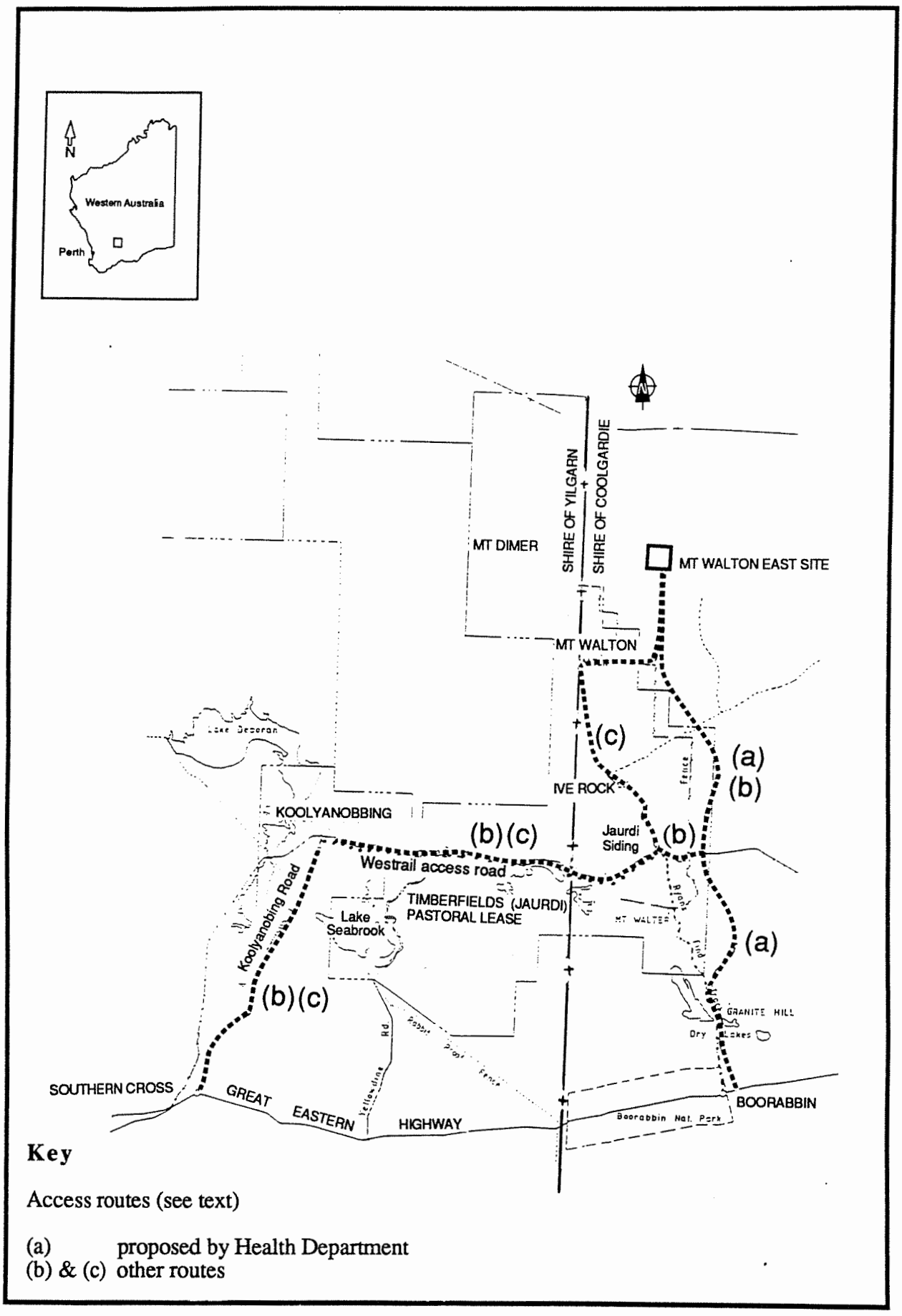

Figure 1. Locality map and transport routes (adapted from EMP)

Several options were proposed for burial using costeans, which are essentially trenches or pits in the ground. The Environmental Management Programme outlined their relative dimensions, and the method of emplacement of waste into them, and their management.

The second Environmental Management Programme outlines the disposal of a limited amount (2.3 cubic metres) of radioactive waste currently held in the WA hospital system, consisting of old exit signs, industrial sources and some laboratory wastes. It is proposed that this material and its packaging be disposed of in 1.2m diameter holes lined with, and then filled in with, concrete. The Programme also describes the storage of organochlorine wastes (PCBs and certain pesticides) at Mt Walton East in sealed, bunded sheds. A detailed survey of quantities of organochlorine wastes has identified 534 tonnes, although undoubtedly more will likely become available.

The scale of the exercise at Mt Walton East has been reduced considerably since the first Environmental Management Programme was published.

3.4 Packaging

The second Environmental Management Programme proposes packaging of high integrity. For radioactive waste, there will be double containment (immediate packaging, then packed into sealed steel containers), then packed into shipping containers for loading onto trucks. After packaging of the radioactive waste, the volume of the waste will increase from 2.3 cubic metres to 46 cubic metres. PCBs and pesticides will also be packaged securely.

4. Public submissions and interactions

For the proposal to transport and dispose of the thorium hydroxide waste, the Health Department conducted a series of information sessions in Kelmscott, Midland, Northam, Merredin, Southern Cross, and Kalgoorlie in 1989. Thirty seven submissions were received by the Environmental Protection Authority, as well as large numbers of three different proforma letters (see Appendix 2).

The Health Department established a Community Liaison Committee for the Integrated Waste Disposal Facility, which met on a number of occasions through 1989 and 1990.

During the public review period for the EMPs released in 1991, the Health Department held a meeting of the Community Liaison Committee at Southern Cross (12 June 1991), which was attended by an officer of the Environmental Protection Authority. The Committee also visited the Mt Walton site. The EPA received twenty two submissions (plus 19 letters from a school in Merredin) for the second and third Programmes (see Appendix 3).

The principal issues raised in the submissions included:

- concern that the facility could be used for wastes from outside Western Australia;
- concerns about future waste streams;
- concerns about potential environmental degradation resulting from the existing access trace, and upgrading the trace to a road; and by attracting people into the area through the existence of the road; and from operations at the site;
- concerns about the relative safety of road and rail transport;
- concerns about prospectivity of the site and the potential for pastoral activities;
- opposition to the proposal; and
- many people suggested that specific legislation should be put in place to control the types and sources of waste sent to the facility, and the operation of the facility.

There was concern expressed about the original proposal for thorium hydroxide waste. Most of those concerns are now not relevant, as that proposal has now been withdrawn. Nevertheless, the Environmental Protection Authority has addressed the issues raised in that proposal.

5. The existing environment

The site meets all the technical site selection criteria, as described in the first Environmental Management Programme. As required by the Environmental Conditions, the Health Department contracted studies covering geology, hydrogeology, and flora and fauna. Whilst further work may be required to determine the detailed characteristics of the site, the Authority considers that there is sufficient information to finalise this evaluation.

The flora and fauna associated with the site occur over a wide range of country. One particularly detailed submission outlined the wilderness values of the site, and considered that a disturbed area, closer to the rail line, would be more appropriate. In particular, the submission considered that the Jaurdi Pastoral Lease (now managed by the Department of Conservation and Land Management) was sufficiently degraded, and was much closer to the rail line than Mt Walton, thus allowing significant cost savings. The Department of Conservation and Land Management, however, do not consider the pastoral lease to be degraded.

The flora and fauna survey indicated the presence of a rare plant on the originally proposed access track, and recommended that further work be done to establish the exact route of the track. This work was done, resulting in the revised route east of the reserve. In its submission, the Department of Conservation and Land Management considered that no rare flora were located on the revised route, but nevertheless recommended that a botanist should survey the trace again, prior to upgrading it to a road. The Environmental Protection Authority concurs with this, and considers that a further botanical survey should be carried out for the chosen route.

The hydrogeological survey indicated a lack of groundwater. Moisture did occur in the upper parts of the boreholes, and it was presumed that this was due to recent rains in the area. The variably weathered rock encountered in the boreholes, which included a hard lateritised layer ranging in thickness from 2 to 6 metres, from about 2 metres below the surface, would be difficult for earth moving equipment to remove. The report considered that blasting for trenches may not be appropriate, given that blasting could generate fractures in neighbouring rock. The Geological Survey considers the site to be suitable for the long-term disposal of the waste, and proposed the concept of large diameter (greater than 1.2m) drill holes. Drill holes would obviate the need for blasting.

Two issues raised in submissions relating to the site concerned potential pastoral activities and mineral prospectivity. The Mines Department have advised that the area does not have a high prospectivity, being between the greenstone belts to the east and west. The country is extremely marginal for pastoral activities.

6. EPA evaluation and findings

6.1 Site

The Environmental Protection Authority considers that the site is environmentally acceptable. The site studies show that the flora at the site and along the proposed access trace occur in many other sites, and that impacts on flora would be small. The site is so remote that there is an acceptably low possibility of human populations being affected by any materials being stored at the site. This is especially the case given the integrity of the mode of packaging and disposal of the low-level radioactive waste, and the integrity of the packaging and storage modes for PCBs and organochlorine pesticides.

The Environmental Protection Authority finds that the site and the disposal of radioactive wastes and the mode of storage of organochlorines are environmentally acceptable, subject to the commitments made by the proponent.

6.2 Access to the site

The proponent has proposed an access route which runs east of the Reserve managed by the Department of Conservation and Land Management, and has already constructed a trace along the proposed route.

Given that the total quantity of waste currently identified comprises less than 600 tonnes (which the proponent estimates could require 30 truck loads, but no more than 100 truck loads), the Environmental Protection Authority considers that there are several possible access routes, all of which are environmentally acceptable. These options, which are shown in Figure 1, are:

(a) access route proposed by the Health Department from Boorabbin on the Great Eastern Highway to the site;

(b) utilise the Westrail access road from Koolyanobbing eastwards to the existing trace, and then north to the site; and

(c) utilise the Westrail access road from Koolyanobbing eastwards, and then through the Reserve managed by the Department of Conservation and Land Management, from Jaurdi to the site.

The Environmental Protection Authority considers that given the limited amount of waste, the limited number of vehicles required would not cause environmental damage to the Jaurdi Pastoral Lease should this be the preferred route (route (c) above). Appropriate action would have to be taken to ensure that the existing track is not degraded, and to minimise any damage to flora adjacent to the tracks in the reserve.

The Environmental Protection Authority also considers that access roads (whichever route is used) should not be upgraded to all-weather roads which would attract people into the area. Instead, the roads should be of a standard sufficient only to enable a limited number of trucks to pass in good weather.

The Authority considers that the Health Department proposals for management of environmental impacts along the access routes are adequate.

The Environmental Protection Authority finds that all of the above access routes to the site are environmentally acceptable subject to a botanical survey being carried out for the route chosen, prior to any upgrading of access.

6.3 Conditioning and packaging of wastes

The Environmental Protection Authority requires that high integrity secondary containment be designed and engineered to ensure: ease of handling; no release of waste in the event of an accident; and to make recovery in the event of an accident straightforward.

The Health Department proposes to package the hospital based radioactive wastes in high integrity secondary containment.

The PCB wastes and the organochlorine pesticides will also be packaged in high integrity containment.

The Environmental Protection Authority considers that any future bulk waste streams will need to be conditioned to maximise chemical and physical non-mobility, to ensure that its physical characteristics are such that when deposited in drill holes, there will be no voids in and around the waste.

6.4 Mode of transport

In the 1988 assessment, EPA required rail transport for radioactive and organochlorine waste streams. This was based on the very large volumes of radioactive waste (7000 tonnes per year), and a significant amount of PCBs (over 1000 tonnes) plus pesticides.

However, given the current small quantities of waste, and the high integrity of packaging, the Environmental Protection Authority considers that road transport is sufficiently safe.

This consideration is based upon the low volumes of waste; the scattered locations of PCBs and organochlorine pesticides; the high integrity packaging proposed for both radioactive waste and PCBs and pesticides, which will ensure that no spillages can occur even in the event of accidents; and adherence by the proponent to the requirements of the Dangerous Goods (Road Transport) Regulations 1983. Current storage locations of PCBs includes remote minesites as well as sites in the metropolitan area. Rail transport would in fact require a great deal of road transport to railheads.

PCBs are of major concern as environmental contaminants. PCBs are resistant to breakdown in the environment, and are soluble in biological substances such as lipids, found in the fatty tissues of animals and humans. From the studies undertaken on PCBs, it may be inferred that harmful effects of PCBs to humans are limited, unless large doses or continuous exposure are involved. However, obvious effects have been identified with other animals, and the bioaccumulation of PCBs has been established. The effects appear principally to be long term, rather than acute, or short term. Thus, in the unlikely event of an accident leading to spillage, the low acute toxicity of PCBs means that clean-up operations will not be prejudiced, and the Environmental Protection Authority considers that the emergency response and cleanup provisions proposed by the Health Department are environmentally acceptable.

The Environmental Protection Authority requires that the road transport operation should have an escort vehicle, trained crews, emergency response equipment (clothing, shovels, empty containers), and radio communications with an operations centre.

7. Associated issues

The issue of legislation to cover the operation of the facility has been raised consistently through the public review process. Whilst the Environmental Protection Authority considers that there is sufficient legislation in place to control the operation of the facility (including the Environmental Protection Act and the Radiation Safety Act), it is aware that the Health Department is investigating the option of specific legislation.

7.1 Aboriginal sites

The proponent has had an Aboriginal site survey carried out for the Mt Walton site and the trace. No sites were discovered. The Aboriginal Sites Department of the Western Australian Museum has recommended "that a survey for archeological sites be carried out when the proposed route of the access road is finalized and prior to construction of this road".

7.2 Issues specific to the transport and disposal of thorium hydroxide

The Health Department have proposed to dispose of radioactive waste in large diameter (greater than 1.2m) drill holes, rather than costeans. These holes could be drilled to within several metres of bedrock (which occurs at a depth of up to about 40 metres), and then filled with bulka bags of waste, to within 4-5 metres of the surface. The hole could then be capped with appropriate material. This method would have the following advantages compared with the costeans proposed in the first Environmental Management Programme:

- less radiation exposure to workers;
- less exposure of the wastes (during emplacement) to the weather and any rain;
- the holes could be covered up to prevent ingress of rain;

- rainwater management in the excavations would be not be necessary;
- it would obviate the need to blast hard rock, with potential; and
- it would obviate any consequential damage to neighbouring filled trenches or costeans.

It would also ensure that no fractures were generated in the rock, which could facilitate the channelling of groundwater, should any groundwater exist. Depending on the spacings between holes, the integrity of the existing geological structures would be retained, giving further assurance about the rate of erosion.

The Environmental Protection Authority is interacting with relevant Government agencies with regard to the requirements for transport and disposal of wastes such as thorium hydroxide.

8. Conclusion

The Environmental Protection Authority considers that the proposal for packaging, road transport and disposal of the hospital based radioactive wastes, as proposed by the Health Department, is environmentally acceptable, subject to all operations conforming to the requirements of the Radiological Council of Western Australia.

The Environmental Protection Authority considers that the proposal for packaging, road transport and storage of PCB and other organochlorine wastes, as proposed by the Health Department, is environmentally acceptable.

The Environmental Protection Authority concludes that the transport of waste to, and storage of waste at, the proposed site east of Mt Walton, as proposed by the Health Department, is environmentally acceptable.

Given the low acute toxicity of PCBs, and the high integrity of containment of PCBs and pesticides, and radioactive waste, the small quantities of waste involved, and the specific transport and emergency response measures proposed by the Health Department, the Authority considers that road transport is sufficiently safe.

The Authority also considers that all of the three possible access routes to the site are environmentally acceptable, given the small quantities of waste involved.

The Environmental Protection Authority considers that the method of disposal proposed for the radioactive waste is environmentally acceptable, as is the method of storage of organochlorines (PCBs and pesticides).

The Authority considers that all operations associated with the radioactive waste should be carried out to the satisfaction of the Radiological Council.

Appendix 1

Environmental Conditions set by the Minister for Environment on the original proposal (1988)

MINISTER FOR ENVIRONMENT

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL PROTECTION ACT 1986)

PROPOSED INTEGRATED WASTE DISPOSAL FACILITY
EASTERN GOLDFIELDS WESTERN AUSTRALIA

HEALTH DEPARTMENT OF WESTERN AUSTRALIA

This proposal may be implemented subject to the following conditions:

1. The proponent shall adhere to the proposal as assessed by the Environmental Protection Authority and shall fulfil the commitments made in the Public Environmental Report (copy of commitments attached).

2. Prior to construction of the proposal, the proponent shall undertake a drilling programme at the chosen site to confirm (or otherwise) the absence of potable water and to confirm (or otherwise) that the depth of clay is in excess of 15 metres, and forward results to the Environmental Protection Authority for assessment.

3. Prior to construction, the proponent shall undertake biological surveys to the satisfaction of the Environmental Protection Authority, to indicate the impact of the facility on any rare and/or endangered species.

4. Prior to construction, the proponent shall undertake a survey to the satisfaction of the Registrar of Aboriginal Sites, to determine if any Aboriginal sites exist on the project area.

Published On
26 OCT 1988

7th Floor, May Holman Centre,
32 ST GEORGE'S TERRACE PERTH 6000 WESTERN AUSTRALIA
Phone (09) 325 4133
Facsimile (09) 325 1873

5. Prior to commissioning, the proponent shall prepare an Environmental Management Programme (EMP) to the satisfaction of the Environmental Protection Authority. The EMP shall be made available to the public and shall include:

   - size of the incinerator;
   - operational procedures;
   - transportation of the wastes;
   - details of packaging of the wastes;
   - emergency procedures;
   - protection of any rare or endangered species found on or near the site;
   - disposal of waste containers and other solid wastes from the facility;
   - a monitoring programme.

6. Prior to commissioning, the proponent shall undertake, for all stages of the transport operation, the following:

   - establish detailed specifications for waste loading, transfer and unloading areas;
   - outline specific safeguards for rail containers and their contents;
   - detail plant site storage and handling requirements, including fire safety;
   - identify responsibility for the various aspects of transport and transfer operations;
   - prepare contingency plans for dealing with spillages should they occur; and
   - liaise with the local communities over emergency procedures.

   The above matters shall be included in the Environmental Management Programme and shall be to the satisfaction of the Environmental Protection Authority and relevant Government agencies.

7. The proponent shall report the results of the monitoring programme to the Environmental Protection Authority at six monthly intervals. These results shall be made available to the public following their consideration by the Environmental Protection Authority.

8. Prior to commissioning, the proponent shall prepare a hazard and safety management strategy for the incinerator, to the satisfaction of the Environmental Protection Authority and relevant Government agencies.

9. Any proposal to dispose of wastes other than those specified in the Public Environmental Report at the Integrated Waste Disposal Facility, shall be referred by the proponent to the Environmental Protection Authority for assessment. No such wastes shall be disposed of at the facility unless it is found to be environmentally acceptable to do so following referral and assessment.

10. The proponent shall be responsible for decommissioning the facility and rehabilitating the site and its environs to the satisfaction of the Environmental Protection Authority.

11. The proponent shall, at least six months prior to decommissioning, prepare a decommissioning and rehabilitation plan to the satisfaction of the Environmental Protection Authority.

12. The proponent shall obtain a Works Approval (prior to construction) and a Licence (prior to commissioning) for the proposed facility under the provisions of Part V of the Environmental Protection Act 1986.

13. For any proposal to dispose of "other wastes" referred to the Environmental Protection Authority pursuant to Condition 9, and subsequently found to be acceptable, the proponent shall prepare (to the satisfaction of the Environmental Protection Authority) an Environmental Management Program, which shall include the issues listed in Conditions 5 and 6 for that proposal.

Barry Hodge, MLA
MINISTER FOR ENVIRONMENT

25 OCT 1996

Appendix 2

List of organisations and individuals who made submissions (1989)

Department of Conservation and Land Management
Department of Mines
Department of Occupational Health Safety and Welfare
Western Australia Police Department
Shire of Coolgardie
City of Kalgoorlie/Boulder
Shire of Murray
Yilgarn Shire Council
Australian Conservation Foundation
Conservation Council of Western Australia
Deco Holdings Pty Ltd
Goldfields Against Serious Pollution
Goldfields Against Serious Pollution - Kambalda Branch
The Guildford Association
Leeuwin Conservation Group (Inc)
Statewide Network of Action Groups
Swan People for Nuclear Disarmament
Swan Waste Action Group
West Australian Railway Officers' Union
Whittington Interceptor Salt Affected Land Treatment Society Inc.
K. Barnes
M. Bradley
M. Corby
G. Giblett
S. Hansen
A. Herlihy
J. Horner
L. & G. Johnson
C. Majors
N.D. McKay
R.K. Millet
P. Molloy
J. Moore
G. Olsen
K. Smith
N. & D. Vinicombe and 8 others
A. Wesley
Proforma 1: 106 copies
Proforma 2: 158 copies
Proforma 3: 437 copies

Appendix 3

List of organisations and individuals who made submissions (1991)

Department of Conservation and Land Management
Department of Local Government
Department of Mines Western Australia
Western Australian Museum
Department of Occupational Health Safety and Welfare
Western Australia Police Department
Radiological Council
Western Australian State Emergency Service
State Energy Commission of Western Australia

City of Kalgoorlie-Boulder

Aboriginal Legal Service of Western Australia (Inc.)
Conservation Council of Western Australia
The Country Womens' Association of Western Australia (Inc.)
Goldfields Against Serious Pollution
Goldfields Against Serious Pollution - Kambalda Branch
Goldfields Naturalists Club Inc
Southern Cross Volunteer Fire Brigade
Statewide Network of Action Groups

C. Heal
N. McKay
A. Wesley
J. Williams

St Mary's Primary School, Merredin - 19 letters