



BACKS TO THE BLAST

*"We know
the world's short
of energy . . .
but at this rate
it could be
short of
people too."*



An Australian Nuclear Story Narrated by **MARTIN VAUGHAN**

Cinematography: GUS HOWARD, PHIL BULL. Editing: ANDREW PROWSE, ROGER HUDSON
Sound: DASHA ROSS, LIVIA RUSIC, PETER BARKER. Producer/Director: HARRY BARDWELL

Produced by Composite Films with assistance from Australian Film Commission

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BACKS TO THE BLAST

an Australian nuclear story

Running time: 50 minutes.

Gauge: 16mm.

Eastmancolor.

Producer/Director: Harry Bardwell.

Narrator: Martin Vaughan.

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P.O. Box 283,

Goodwood,

South Australia 5034.

Outline

BACKS TO THE BLAST is a concise historical documentary dealing with South Australia's uranium industry.

Researched and produced during the last two years by Harry Bardwell and Composite Films, **BACKS TO THE BLAST** provides a unique film overview of our nuclear industry to date.

After scanning vast amounts of archival material relating to Radium Hill, Thebarton, Port Pirie and Maralinga, Harry Bardwell has built a telling collage of historical press clippings, film footage, radio reports and early photographs.

From this solid background, **BACKS TO THE BLAST** reaches into the eighties with a great deal of disturbing contemporary location footage.

Key technical information is provided by Professor Sir Ernest Titterton from the Australian National University and Mr. Rob Robotham, a health physicist who has worked with both the British and Australian Atomic Energy Commissions.

South Australian Mines and Energy Minister, the Hon. Roger Goldsworthy explains current government attitudes, whilst the industry's past performance is detailed by people directly involved: miners, transport workers, residents, process workers and military personnel present at the Maralinga bomb tests tell their story on camera.

At a time when the nuclear question is overcharged with emotion and inaccuracy, **BACKS TO THE BLAST** asks new questions and states previously unstated facts in a refreshingly frank and responsible manner. Consequently, this film will also make new headlines.

BACKS TO THE BLAST is narrated by Martin Vaughan, star of the television series, *Power Without Glory*.

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Relevant statistics

Although there is no known statistical survey examining the effects of Australia's nuclear industry on the health of its workers, **BACKS TO THE BLAST** uncovers several disturbing trends in the case of South Australian workers.

While preparing information for the film, researchers discovered the following:

Radium Hill

Preliminary mortality analyses conducted by the South Australian Health Commission indicate that among those miners who worked for more than twelve months underground, 40.9% of those who have died, have died of cancer. This compares with a national average of 17.8% cancer-related deaths in the overall mining industry. Among these Radium Hill deaths, lung cancer is four times more prevalent than normal.

Port Pirie

Between 1957 and 1977, 80 hectares of tailings from the abandoned Uranium Oxide Plant remained unfenced in Port Pirie. During this period these dams were a favourite playground for children from the western part of the town. The South Australian Department of Mines and Energy released information in 1980 showing that gamma radiation over the dams was eighty times the background level. A more recent survey carried out by the Australian Atomic Energy Commission shows that radon gas concentration over the dams is 140 times the background count. The emanation rate of radon at this site is 132pCi/m²/sec. The current safety level recommended by the USA Environmental Protection Agency is 2pCi/m²/sec. Despite concern shown by some of the town's residents, the South Australian Government declines to investigate the effect these abnormal radiation levels have had on the children's health, or to monitor the levels of radiation inside the houses immediately adjacent to the dams.

Amdel, Thebarton

No known survey has been carried out to investigate the state of health of the workers employed at the Thebarton uranium pilot plant during the fifties. However, a survey carried out by the workers themselves indicates that of the fourteen welders employed to break the plant down, six have died of cancer and two of leukaemia.

Maralinga

Approximately 2,000 military and civilian personnel were involved in the atomic bomb tests at Maralinga and Emu. By April 1981, the Nuclear Veterans' Association had contacted 360 of these people. Of these, 116 had contracted cancer, and eighty were reported dead, although this has not been confirmed by death certificates. Commonly reported afflictions include sterility, anxiety neurosis, skin, bone and blood disorders and child deformities.

Indian-Pacific Railway Line

BACKS TO THE BLAST shows that hundreds of thousands of tons of radio-active material from Radium Hill forms the bedding for the Indian-Pacific Railway Line.

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Biographies

PROFESSOR SIR ERNEST W. TITTERTON, C.M.G., M.Sc., Ph.D., F.R.S.A., F.A.A.

Sir Ernest Titterton, sixty-five, has been Professor of Nuclear Physics at the Australian National University since 1950.

After beginning his work with nuclear fission at Birmingham University in 1939, Sir Ernest developed the trigger mechanism that exploded the world's first atomic bomb in New Mexico in 1945, and was subsequently involved in further atomic tests.

At the commencement of the atomic test programme in Australia, Sir Ernest became a member of the Atomic Weapons Test Safety Committee, and in 1957 he became that body's chairman.

Along with fellow Englishman Sir Phillip Baxter, Sir Ernest has been an enthusiastic proponent of Australian nuclear development for many years. He has been a member of several influential bodies, including the Australian Atomic Energy Commission, the Australian Ionising Radiation Advisory Committee, and the Defence Research and Development Policy Committee.

F.P.J. ROBOTHAM M.Inst.P., M.A.I.P.

'Rob' Robotham, forty-six, has worked as a Health Physicist and Radiation Protection Officer since 1957, holding posts at the Atomic Energy Research Establishments at Harwell in England and Lucas Heights in Australia.

After observing the French atomic weapons tests at Tahiti in 1972, Robotham became actively involved in the campaign against uranium mining.

Robotham has written many scientific papers on the effects of ionising radiation. These include a joint publication with Sir Ernest Titterton, "Uranium: Energy Source Of The Future?" (1979), and a forthcoming book, tentatively titled "Maralinga: British Bomb - Australian Legacy", to be published by Collins.

Mr. Robotham is currently the University of Melbourne's Radiation Officer.

HARRY BARDWELL, DIRECTOR/PRODUCER, BACKS TO THE BLAST

Harry Bardwell, twenty-eight, first became involved in film-making while studying Environmental Sciences at the University of Western Australia.

After his graduation in 1974, Bardwell worked as a video recordist before joining Perth's ABC-TV as a cinecameraman. He then transferred to another Western Australian television channel, STW-9.

Resident in South Australia since 1977, Bardwell has played an energetic role in the local film industry, working as scriptwriter, cameraman and director on films for several independent producers as well as for the South Australian Film Corporation.

After a career involving work on about eighty different films, **BACK TO THE BLAST** is Harry Bardwell's third independently produced and directed work.

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Selected quotes

RADIUM HILL MINE VENTILATION

"... there was no big fan room there... The dust just filtered up through the levels. If someone fired on a lower level his smoke and fumes would just filter up through your stope, finding its own airway..."

Jim Lawrie, miner at Radium Hill, 1956-62.

INDIAN-PACIFIC BALLAST RADIOACTIVE

"... we used to go in and bring out tailings for ballast on the line. We must have carted hundreds of thousands of tons out over the five-year period..."

Howard Arbon, guard on the Radium Hill train, 1958-63.

RADIOACTIVE PLAYGROUND

"... during the late 1950's I was one of a gang of kids who used to play in the tailing dams. We used to paddle and swim in the water. We didn't know it was radioactive."

Anna Doyle, cancer victim, Port Pirie.

HOT CONCENTRATES IN ABANDONED TANKS

"... these tanks still contain radioactive residue... which will remain so for quite a long time, a few thousand years. A hard decision will soon have to be made because these tanks are now corroding..."

Rob Robotham, Health Physicist.

WORKER HEALTH CHECK BLOCKED

"I started checking the records of welders who had worked at AMDEL and found several who had died of cancer or leukaemia. But when the A.B.C. got to hear about it and started asking questions, the easy access to information became blocked off."

Gus Elvey, ex-welder, AMDEL.

SOLDIERS BLASTED AT A-TEST

"... we just used to wear shorts, and when the first bomb went off you got sunburn on your arms and legs. That's how close we were to it."

Bob Elliot, Army, Maralinga.

"... we had our eyes closed and our hands over them and when the bomb went off you could see right through your hands..."

Maralinga veteran.

BLACK MIST

"... you could see this smoke coming through the trees. It went right over us, and a sort of grey blackish dust settled over the tent."

Lillie Lennon, Local Aborigine.

"It was a standard joke around the camp — how many boongs we picked up yesterday or the day before. These people were wandering around willy-nilly... half-clad, and with no shoes. And that ground was so hot it will still be clicking two thousand years from now..."

Patrick Connelly, R.A.F., Maralinga.

'Backs to the Blast'

"BACKS TO THE BLAST" running time 50 minutes. Producer: Harry Bardwell, at Ethnic Cinema, cnr. Port and Milner Rds., Hindmarsh from June 24-28, (7.30 p.m.). Late screening 9 p.m. Friday, Saturday and Sunday. A special screening has been organised by CANE on Tuesday, June 30, in Druids Hall, Park Street, Hyde Park (7.30 p.m.).

Backs to the Blast is aptly named. It tells the story of how we have turned our backs on the consequences of working and experimenting with nuclear energy. As a result, we are left with a number of problems, the dimensions of which have not been measured, and we are building more problems of even greater dimensions.

The tailings dam at Port Pirie was the playground of

dozens of children until Friends of the Earth (Pt. Pirie) exposed the dangers and government erected a fence. (The dam walls were recently breached by storms and more government funds are to be used to prevent radioactive material reaching the sea.)

Yet, the Mayor of Pt. Pirie and the Minister of Mines and Energy are hopeful of reviving the nuclear industry in this State.

But it is the human story told so well in interviews of former inhabitants of the Maralinga area — the Aboriginal people; of drivers and mechanics who were with the Services in the area, that the tragedy of our actions is unfolded and there is a disturbing aspect.

In interviews with Sir Ernest Titterton he denies anyone was injured or affected in any way by the Maralinga tests, or by any nuclear activity. He is as confident today as when the tests were conducted, that the safety system was foolproof.

When one realises that humans are still working with nuclear energy, still confident that no one is or will be affected, still confident that the safety precautions are perfect, then the cold shivers begin — it seems humans never learn!

The film is of historical interest with scenes of early mining at Mt. Painter, of Radium Hill in more recent years, and the bomb tests. With so many interviews, the film could have fallen apart and become just a series of portraits, but the editing has been tight and continuity has been held by skilful use of modern, as well as, historical shots.

At times I found it a little confusing when switching from welding at AMDEL, to Pt. Pirie tailings, to mining at Radium Hill, and back again, as the somewhat complex subjects really required more in-depth treatment.

It is a pity there was not more on the spread of the Maralinga radioactive clouds over Adelaide and Queensland during some of the tests, or the relation between the destruction of a nuclear power station by conventional bombing and such clouds. Perhaps the next film will examine such issues.

It is a film all Australians should see before making their decisions for a nuclear future.

—James L. O. Tedder

NCEC CONFERENCE

The National Council of Education Centres will hold a national conference in Adelaide from July 19 — July 22, 1981, immediately prior to the Eleventh Annual Conference of the South Pacific Association for Teacher Education (SPATE), July 22 — 26.

The program comprises keynote speakers and workshop/discussion sessions on issues affecting education centres:

- basis for funding centres over the coming triennium;
- co-operation between centres;
- education centres as part of a national network of support agencies;
- professional development and renewal; school improvement programs;
- management and leadership strategies for education/service centres;
- role of centres in dissemination and discussion of major education issues e.g. 'schooling for 15 & 16 year olds'.

Fee for the NCEC conference is \$30 for the first delegate from an organisation, \$10 for the second and other representatives. Delegates from currently paid up member centres (NCEC) pay no registration for NCEC conference and the fee is met from the annual subscription.

SA contact for NCEC is Michael Hewitson, PO Box 433, Salisbury, SA, 5108, phone (08) 258 8477.

Maralinga: The story continues

Backs to the Blast is a chronicle of alarming ignorance, official condescension, and suspect safety precautions.

It is a parochial documentary in the best sense of the word, being exclusively concerned with South Australia's contribution to the nuclear industry.

Director Harry Bardwell proceeds in straightforward fashion, intercutting talking head interviews with historical documents and old film footage — linked by Martin Vaughan's narration.

Bardwell obviously wants to use the past to make a point about any further uranium mining within the State.

Calmly and convincingly, the film records the risks faced by underground miners in the first radium boom in the '30s.

Rob Robotham, a health physicist and radiation protection officer, acts as another link, and looks at the dangers of the tailing dumps around Port Pirie.

One woman, now suffering from cancer, remembers how she and other kids in a gang once merrily frolicked in water around the dumps.

The film then looks at the effect of the atomic blasts on the people who lived and worked around Maralinga.

Sir Ernest Titterton is on hand as the voice of establishment science, assuring all and sundry that adequate safety precautions were taken at the time.

FILMS

Ethnic Cinema: *Backs to the Blast* special screening Opens June 24

But he's subtly undercut by the editing. When he says for example that the site was ideal because it was devoid of people, we cut immediately to some Aboriginal people who lived in the area.

Clearly few people in power at the time bothered to explain anything to the workers on the site, and now the workers, aware of the dangers of cancer, have been given a chance to have their say.

Backs to the Blast runs for 50 minutes and will begin a limited commercial release on June 28 at the new Ethnic cinema, corner Port and Milner roads, Hindmarsh.

Terry Jennings

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Adelaide Advertiser
17 June 1981

Film-man blasts radium danger

FAMILIES have been holding weekend picnics and barbeques on a site littered with radioactive tailings.

South Australian film-maker Harry Bardwell made this discovery when he visited a disused radium mine to shoot a documentary.

Mr Bardwell's 50-minute movie "Backs To The Blast", also features a yellow-cake plant, one km from the town centre of Port Pirie, and the hazards it represents to the townspeople.

The 28-year-old independent film-maker, started the project in October 1979, intending it to be a nuclear history of South Australia.

He began at Radium Hill, a uranium mine 150 kms west of Broken Hill, which was first worked in 1910. Old footage of miners at work is combined with on-site interviews with surviving workers to demonstrate the dangerous conditions at the mine.

An interim study carried out by the South Australian Health Commission in 1977 found that cancer was responsible for 40.9 per cent of the deaths among men who had worked at the mine.

Mr Bardwell said this compares with a 15 to 20 per cent cancer death rate in normal circumstances.

'Common'

"When blasting took place at a low level in the mine, dust and smoke would rise and hover around workers on a higher level," said Mr Bardwell.

Today the mine and its one million tons of radioactive tailings remain unfenced and open to the public.

"When we first went up there we came across a family sitting on the tailings enjoying a picnic. Apparently that's quite a common practice," said Mr. Bardwell.

... oxide, or yellow cake plant, for

Families picnic on mine tailings

By **ADRIAN TAME**

Radium Hill was at Port Pirie, 200 kms north of Adelaide.

The plant, and its 80 hectares of radioactive tailings, are within one km of the town centre. Two months ago the S.A. Government considered a plan to cover the tailings with clay.

"There is no fence around these tailings, and traditionally the children of Port Pirie have played there and swam in the dam," said Mr. Bardwell.

The Government has consistently refused to carry out a survey of the health of nearby residents, according to Mr. Bardwell, although high background levels of radiation have been measured at the plant.

"Hopefully making this kind of information public through the film will embarrass the Government into finally taking some action," said Mr. Bardwell.

Producer Harry Bardwell will defend the making of the controversial *Backs To The Blast* documentary during *State Affair* on Channel 7 from 6 tonight.

The program, which drew harsh criticism from the Minister of Mines and Energy, Mr. Goldsworthy, will be screened by Seven at 9.30 p.m.

Narrated by Martin Vaughan, star of the series *Power Without Glory*, it deals with SA's uranium mining industry and imparts some disturbing information about workers and citizens.

After scanning vast amounts of archival material relating to Radium Hill, Port Pirie and Maralinga, 38-year-old Bardwell has built what has been described as a telling collage of



Harry Bardwell defends his documentary.

Radium in controversy

historical press clippings, film footage, radio reports and early photographs.

His implication is clear: people have suffered badly from working with or coming into contact with radium-related substances, and will do so again if no action is taken.

Mr. Goldsworthy believes the film to be misleading, and he slammed it without having seen it.

"I am advised that it makes little attempt to present in their full perspective the issues it canvasses and that, in fact, the commentary makes a number of allegations which are patently false," he said last month.

"The documentary was being used by the opponents of uranium mining to support their case," he added.

In a recent newspaper letter, Bardwell answered: "I have not spent two years researching and making this film to engage in a bout of on-screen Ardeid-bashing for the sake of it."

"Nor do I intend to malign the current Government or the legacy left by the 1950s uranium industry."

"Rather, I have set out to show that the problems created by the

SA nuclear industry have not subsided with that industry.

"The reviewers agree that my film does this in a professional, journalistic manner."

"However, when this Government and its agencies refuse to admit that mistakes were made in the past, and that many people now appear to suffer as a result of those mistakes, the charge of negligence becomes more meaningful."

Documentary researchers say that among Radium Hill mine deaths, lung cancer was four times more prevalent than normal.

No official survey had been made to investigate the health of workers at the Thebarton uranium pilot plant during the '50s, but a survey by employees indicated that of the 14 welders employed to break the plant down six had died of cancer and two of leukaemia.

Show MPs U-film: Millhouse

State Parliament will be asked to screen a new locally produced documentary about uranium mining and atomic bomb testing in SA.

The State Parliamentary Leader of the Australian Democrats, Mr. Millhouse, said yesterday he wanted the film, *Backs to the Blast*, screened during a dinner adjournment at the next session of Parliament.

Mr. Millhouse, speaking after a preview screening of the film, said it was an SA story which showed the "dangers and the terrible risks" involved with uranium and what had happened in the past because of ignorance.

He particularly wanted Liberal MPs to view the film.

Political party and Government officials were among yesterday's preview audience.

According to the film's producer and director, Harry Bardwell, 29, of Ashford, a key quotation from the documentary: "We know the world's short of energy... but at this rate it could be short of people, too," sums up its message.

"I hope if uranium mining is to go ahead, they are a lot more careful than they have been up to date," he said.

During the 50-minute film, interviews with people involved with SA uranium history — miners, transport workers, residents, process workers and military person-



Mr. Bardwell... "Australia could learn from past experiences."

nel present at the 1950s Maralinga bomb tests — tell their story and about some mistakes they say were made.

Bardwell said the point of the film, which had taken two years to research and produce, was that Australia could learn from past experiences.

Preliminary mortality analysis conducted by the SA Health Commission indicated that among those miners who had worked for more than 12 months underground

at the Radium Hill uranium mine, 40.9 p.c. of those who had died had died of cancer.

This compared with a national average of 17.3 p.c. cancer-related deaths in the overall mining industry.

Among these Radium Hill deaths, lung cancer was four times more prevalent than normal.

The film says:

- Hundreds of thousands of tonnes of radioactive material from Radium Hill formed the bedding for the Indian-Pacific railway line.

- About 2000 military and civilian personnel were involved in the atomic bomb tests at Maralinga and Emu during the 1950s.

- By April, 1981, the Nuclear Veterans' Association had contacted 360 of these and 116 had contracted cancer and 80 had been reported dead, although this had not been confirmed by death certificates.

- Commonly reported afflictions included sterility, anxiety, neurosis, skin, bone and blood disorders and child deformities.

The film will be screened at the Ethnic Cinema, corner of Port and Milner roads, Hindmarsh, from June 24 to 28.

It was produced with help from the creative development fund of the Australian Film Commission.



OUR OWN ATOMIC FILM ASKS AWKWARD QUESTIONS

Sir Ernest Titterton, one of Australia's supporters of nuclear power, has his say in the new film "BACKS TO THE BLAST", produced and directed by Harry Bardwell.

He is shown defending the safety record at the Maralinga atomic weapons test site where more than 20 A-bombs were tested.

But cut into his sentences are shots of the victims of Maralinga.

Who, then, are we to believe?

Who are we to believe when the scene shifts to the Rare Earths dump Port Pirie? Mayor Bill Jones or environmental activist Ally Fricker?

Both are in the film. You can make up your own mind. "BACKS TO THE BLAST" is 55 minutes of history too little told elsewhere.

Some of the information gathered is new. Who, for example, was aware that thousands of tons of radioactive waste material from

BACKS TO THE BLAST

Radium Hill was used in the construction of the Indian-Pacific railway?

Health physicist Rob Robotham provides a sober counter-balance to the bromides offered by Sir Ernest Titterton and the egregious Bill Jones.

There is an interesting section on AMDEL at Thebarton.

After its preview in the city last month "BACKS TO THE BLAST" had an advertised "season" of just four nights at the Ethnic Cinema, Hindmarsh.

We will have to see that it gets much more extensive screening.

—B.W.M.

THE HERALD
July 1981