

**IN THE DUST DISEASES TRIBUNAL
OF NEW SOUTH WALES**

DDT NO. DDT00209/2011 and 209/2011/1

**VANESSA ADELE FARROW AS EXECUTRIX OF THE ESTATE OF THE
LATE LEONARD ARTHUR FARROW**

Plaintiff

ERARING ENERGY & ORS

Defendant

**CONTRIBUTIONS ASSESSMENT
DETERMINATION**

In this matter I have been appointed as Contributions Assessor by the Registrar of the Dust Diseases Tribunal pursuant to clause 49(1) of the *Dust Diseases Tribunal Regulation 2007* ("the Regulation").

1. The plaintiff is the widow of Leonard Arthur Farrow who died on 29 September 2011. For the purposes of this contributions assessment I am to assume that the deceased died of a mesothelioma and it was thus an indivisible disease.
2. The deceased, as I shall refer to Mr Farrow, was employed by statutory predecessors of Eraring Energy who have been sued pursuant to the *Electricity Legislation Amendment Act 1995*. Pursuant to section 3 of that Act, it is alleged that it is the same legal entity as the Electricity Commission of New South Wales. For the purposes of this assessment I will refer to it as "EE".
3. On 15 September 2011 EE filed a document described as first cross claim nominating the following cross defendants:

- Rolls Royce Australia Ltd (formerly known as John Thompson (Australia) Pty Ltd) (“RR”);
 - Babcock International Ltd (“BIL”);
 - Babcock Australia Pty Ltd (“BAL”);
 - Power Technologies Pty Ltd (formerly International Combustion of Australia Ltd) (“PT”);
 - Alstom Australia Ltd (formerly the English Electric Company of Australia Pty Ltd) (“Alstom”);
 - Rexel Group Australia Pty Ltd (“Rexel”);
 - Amaca Pty Ltd (formerly known as James Hardie & Coy Pty Ltd) (“Amaca”);
 - Wallaby Grip Ltd (“WG”);
 - Wallaby Grip (New South Wales) Ltd (in liquidation) (“WGNSW”).
4. As Contributions Assessor I am to have regard to the particulars filed by the plaintiff and to the material contained in the replies that have been filed by the defendant and cross defendants.
5. Cross claims by EE have been issued against the following parties:
- a) Rolls-Royce Australia Limited (“Rolls Royce”)

Rolls Royce is sued in relation to its role in the design and construction of the boilers and associated steam plant at the Wallerawang Power Station which were insulated, sealed and/or packed with products containing asbestos dust and fibre.
 - b) Babcock International Limited (“BIL”)

BIL is sued in relation to its role in the design and construction of the boilers and associated steam plant at the Wangi Power Station which were insulated, sealed

and/or packed with products containing asbestos containing asbestos dust and fibre.

c) Babcock Australia Pty Limited ("BAL")

BAL is sued in relation to its role in the design and construction of the boilers and associated steam plant at the Wangi Power Station which were insulated, sealed and/or packed with products containing asbestos dust and fibre.

d) Power Technologies Pty Limited ("Power Tech")

Power Tech is sued in relation to its role in the design and construction of the boilers and associated steam plant at the Vales Point Power Station which were insulated, sealed and/or packed with products containing asbestos dust and fibre.

e) Alstom Australia Limited ("Alstom")

Alstom is sued in relation to its role in the design, construction and installation of turbines and associated plant at the Vales Point Power Station which were insulated, sealed and/or packed with products containing asbestos dust and fibre.

f) Rexel Group Australia Pty Limited ("Rexel")

Rexel is sued in relation to its role in the design, and construction and installation of turbines and associated plant at the Vales Point Power Station which were insulated, sealed and/or packed with products containing asbestos dust and fibre.

g) Amaca Pty Limited ("Hardies")

It is alleged that the industrial boilers, turbines, steam piping and associated steam plant at the Wallerawang, Wangi and Vales Point Power Stations constructed by contractors of Eraring Energy's predecessors including BIL, BAL, Rolls Royce,

Power Tech, Alstom and Rexel were insulated, sealed and/or packed with asbestos products manufactured by Hardies.

h) Wallaby Grip Limited ("WGL")

It is alleged that the industrial boilers, turbines, steam piping and associated steam plant at the Wallerawang, Wangi and Vales Point Power Stations constructed by contractors of Eraring Energy's predecessors including BIL, BAL, Rolls Royce, Power Tech, Alstom and Rexel were insulated, sealed and/or packed with asbestos products manufactured by WGL.

i) Wallaby Grip (NSW) Pty Limited ("WG NSW")

It is alleged that the industrial boilers, turbines, steam piping and associated steam plant at the Wallerawang, Wangi and Vales Point Power Stations constructed by contractors of Eraring Energy's predecessors including BIL, BAL, Rolls Royce, Power Tech, Alstom and Rexel were insulated, sealed and/or packed with asbestos products manufactured by WG NSW.

6. The plaintiff's employee history card, Attachment 3 to that reply, discloses that EE's predecessor, the Electricity Commission of New South Wales ("Elcom") employed the deceased to work as follows:

1. Wallerawang Power Station

- | | |
|-------------------------|---|
| (a) 10.05.63 – 02.08.64 | Cleaner / labourer |
| (b) 31.08.65 – 29.10.65 | Assistant Power Plant Operator (APPO) Training Course |
| (c) 30.10.65 – 09.10.66 | Assistant Power Plant Operator |

2. Wangi Power Station

- | | |
|-------------------------|---------------------------|
| (a) 03.08.64 – 29.11.64 | Cleaner labourer |
| (b) 30.11.64 - 11.07.65 | Auxiliary Plant attendant |

(c) 28.08.65 – 30.08.65 Auxiliary Plant Attendant

3. Pymont Power Station

12.07.65 – 27.08.65 Assistant Power Plant Operator Training Course

(*However, it is noted that exposure is not alleged at the Pymont Power Station)

4. Vales Point Power Station

10.10.66 – 05.11.88 Assistant Power Plant Operator

(*However, it is noted that the Plaintiff alleges exposure only up to December 1987)

Eraring admits that it is successor to the liabilities of Elcom in relation to the Plaintiff's employment.

7. At paragraph 3.4 of the reply, EE sets out its summary of the exposure that the plaintiff would have been subject to in the course of his employment at EE. This is disputed by the plaintiff. I reproduce it so that it is clearly set out.

**Eraring admits that the Plaintiff may have been exposed to asbestos dust and fibre during his part or parts of his employment with Elcom. However, at all material times Elcom implemented procedures to prevent injury to persons such as the Plaintiff and in order to provide a safe working environment. These procedures included general cleaning and ventilation measures such as exhaust fans and masks.*

Further, Eraring submits that the Plaintiff would not have been exposed to asbestos after November 1974. On 25 November 1974, Elcom issued General Standing Instruction No 2037, which regulated the handling of asbestos insulation including the institution of specific guidelines for the safe handling of asbestos. Attached is a document entitled: "Asbestos Safety Guidelines Adopted by the Electricity Commission of New South Wales" (Attachment "4") which summarises the guidelines that were instituted and adopted by Elcom as at that date and following. It is noted that the November 1974 Standing Instruction (extracted and attached as Attachment "5") provided that the following work methods be adopted for the safe handling of asbestos:

Work Methods

Preparation

Wetting down through pre-soaking

Plastic sheeting on plant and floor

Fitting of exhaust hoods to all machines used for cutting asbestos

Vacuuming

Sealed disposal containers

Defined areas for asbestos work, roping and screening of asbestos contaminated areas

Provision in Specifications that all contractors must observe these requirements

Protective Equipment

Respirators

Protective clothing (which is vacuumed at the completion of work)

Laundering

Separate lockers for protective clothing

Wash and shower facilities separate from the contaminated area"

The above noted Guidelines were updated periodically. For example General Standing Instruction 2037/2 (referred to in item number 3 of the list of Guidelines adopted by Elcom – Attachment "4") provided:

"In addition to the previous GSI:

Asbestos to be covered or sealed

Deteriorated asbestos to be removed and replaced with asbestos-free

Asbestos in stores to be removed substituted

Asbestos in power stations to be recorded

Airborne Asbestos level testing

Medical examinations and a register of employees exposed to asbestos."

Eraring Energy notes that airborne asbestos level testing was undertaken in the period so as to prevent exposure to asbestos both during and after the removal works. Further, it is noted that during such removal works the areas in which the work was undertaken were encapsulated. Workers within the encapsulated areas were required to comply with the above procedures including the use of respiratory equipment and work methods. Eraring submits that these procedures prevented the exposure to asbestos to persons such as the Plaintiff in this period. Eraring notes that airborne asbestos fibre testing was

undertaken both during the removal of lagging and after the removal of the insulation. For example, Eraring refers to the attached Test Report (Attachment "6") showing the results of airborne testing in and around the unit 1 & 2 control panel at Vales Point Power Station on 21 March 1979. Samples taken from various locations on and around the boilers were all NIL. A further test report (Attachment "7") dated 18 September 1979 relates to testing undertaken after the removal of insulation from the number 4 boiler on the bottom distribution drums. All readings are less than 0.01 and the comment states that the results are satisfactory and that area restrictions could therefore be removed. Further, it is noted that these readings are well within even the current national exposure standard of 0.1 as set out in the National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) as amended].

The above evidences the procedures adopted by Elcom to prevent exposure to asbestos from November 1974. Accordingly, Eraring submits that the Claimant would not have been exposed to asbestos after this date.

Further, it is noted that exposure is not alleged after December 1987.

8. EE admits that it was an occupier and an employer. It says that it is a Category 2 defendant, not Category 1. It asserts, and it is not really disputed, that RR, BIL, BAL, PT, Alstom, Rexel, Amaca, WG and WGNSW were all Category 1 defendants. It asserts that PT also is a Category 2 defendant as well as Category 1.
9. In my view, EE is a Category 1 defendant. I accept the submissions contained inter alia in the eighth and ninth cross defendants' reply to the first cross claim and note that RR also makes a similar assertion although on a slightly different factual basis.
10. It is clear from the deceased's affidavit at paragraphs 21 and 22 that he assisted in lagging. There is other evidence reproduced in WG's reply that clearly shows that EE employed ladders to perform installation work within the meaning of the Regulations at Wangi or generally at other power stations as set out in the eighth and ninth cross defendants' submissions.
11. The case that EE makes against the cross defendants is as follows.

Rolls-Royce Australia Limited ("Rolls-Royce") – the First Cross Defendant

Eraring refers to its Cross Claim ("Attachment 2"). Pursuant to contracts 117 and 450 Rolls-Royce designed 6 boilers and associated plant for installation at the Wallerawang power Station. It was an integral part of the design of the boilers and associated plant that they be insulated, sealed and/or packed with products containing asbestos dust and fibre. These boilers were constructed installed and commissioned at various dates from May 1957 to approximately on our about 1963. Eraring refers to the Plaintiff's Affidavit attached to the Statement of Particulars in which the Plaintiff states:

"I started at the Wallerawang Power Station on 10 May 1963 as a cleaner / labourer...Part of the Wallerawang was operational when I arrived, however the number 4 boiler house in "A" Station was still under construction and about to go into service..."

Attached hereto are copies of various documents relating to contract 117 evidencing the use and installation of asbestos insulation products by Rolls-Royce at Wallerawang:

- Letter from Rolls-Royce to Elcom dated 18 October 1951 re tender for the Supply, Delivery, Erection, Testing, Setting to Work and Maintenance of two pulverised fuel fired "John Thompson boilers" – G 1135 (Attachment "8")
- Letter John Thompson to Electricity Commission plus attachment dated 8 August 1955 – order on James Hardie for K-Lite slabs and asbestos millboard – G 1153 (Attachment '9')
- Letter dated 16 January 1956 from Rolls-Royce to Electricity Commission dated 16 January 1956 re James Hardie photographing the lagging installation (G1167) (Attachment "10")
- Letter John Thompson to Electricity Commission re order asbestos fibre from James Hardie dated 29 May 1957 – G1202 (Attachment "11")
- Order on James Hardie Fibrefill Asbestos bags by John Thompson dated 24 May 1957 – G1203 (Attachment "12")
- Extract John Thompson letter. Delivery docket James Hardie millboard and K-Lite dated 3 February 1958 – G1213 (Attachment "13")
- Letter John Thompson to Electricity Commission re sub-contract order on James Hardie Pty Limited dated 17 August 1959 – G1279 (Attachment "14")

- Letter John Thompson to Electricity Commission re shipping materials from James Hardie dated 1 June 1961 – G 1299 (Attachment “15”)
- Letter John Thompson to Electricity Commission re shipping materials dated 1 August 1961 including those from James Hardie attachment delivery docket from James Hardie of cartons of shiplap type A and type B K-Lite and cartons of K-Lite dated 03.07.61 – G1304 (Attachment “16”)
- Letter John Thompson to Electricity Commission dated 14 July 1961 re delivery including those from James Hardie attached delivery dockets cartons of K-Lite – G 1305 (Attachment “17”)
- Letter John Thompson to Electricity Commission re delivery of products including those from James Hardie plus delivery docket - woven asbestos dated – G1306 (Attachment “18”)

12. In relation to BIL:

BIL is sued in relation to its role in the design, construction and insulation of boilers and associated steam plant at the Wangi Power Stations at which the Plaintiff worked from 3 August 1964 until 11 July 1964.

BIL contracted with Eraring's predecessors, the Department of Railways for the supply, delivery, installation, setting to work, testing and maintenance of steam generating plant at the Wangi Power Station under Contract 1194R. BIL required or stipulated that such boilers and associated plant be insulated, sealed and/or packed with products containing asbestos dust and fibre.

13. It also relies on the judgment of Judge Curtis in *Re Royal Babcock Australia Ltd v Eraring Energy and Babcock International Ltd; Eraring Energy v Babcock Australia Ltd and Babcock International Ltd* [2001] NSWDDT 5 in relation to BIL's role as a supplier, designer and manufacturer and/or installer of products, plant and equipment which contained asbestos at the Wangi Power Station at paragraphs 21 to 23:

“21. In 1945 the Commissioner for Railways contracted with BIL for the construction of two Babcock and Wilcox water tube boilers at White Bay Power Station. In 1948 he called for tenders for the construction of four similar boilers at Wangi. On 3 August 1948 BIL submitted a tender complete with specifications and plans to complete the Wangi works at a price of £1,632,304. On 7 October 1948 the Commissioner accepted this tender. On 10 September 1948 BAL was incorporated to commence business on 1 October 1948.

22. On 8 September 1948 BIL wrote to the Commissioner in relation to the White Bay contract advising of its intention to form BAL for the purpose of carrying on the business previously conducted by BIL in Australia through its Australian branch. BIL wrote that:

The new company is to be incorporated almost entirely for administrative reasons and the whole of the issued capital will be held by BIL under whose control the new company will carry on all existing contracts.

23. On 25 October 1948 the Commissioner wrote to BIL advising of his approval of the Wangi contract "being considered as having been placed with BAL." On 19 May 1949 a formal contract was executed between the Commissioner and BAL which contract recited this agreement.”

14. In relation to BAL, EE says that BAL undertook the works at the Wangi Power Station in accordance with plans, specifications and drawings of BIL which required or stipulated the use of products containing asbestos dust and fibre. These works were undertaken from 1948 up to approximately 1960, at which time the plaintiff worked at the power station. Reliance is also made on the affidavit of Trevor Morton in the DDT proceedings no. 17 of 1992, portions of which are reproduced in the reply and which I will not set out.
15. The material reproduced by EE also supports extensive use of Hardie’s products at Wangi and also WG products by BAL at Wangi.

16. PT, formerly known as International Combustion of Australia Pty Ltd and referred to in some of the replies as ICAL, is alleged by EE to be both Category 1 and Category 2.
17. The plaintiff worked at Vales Point Power Station from 10 October 1967 until 5 November 1988, although he only alleges his exposure until December 1987.
- Under contract 796 dated 29 June 1960 Power Technologies with Elcom, Power Technologies contracted for the supply, delivery, installation, setting to work, testing and maintenance of two boilers and associated plant at the Vales Point Power Station. These boilers were constructed between 1960 and 1965.
 - Under Contract 1004 in or about 1961 Power Technologies contracted to Elcom for the supply, delivery, installation, setting to work, testing and maintenance of a further boiler and associated plant at the Vales Point Power Station. Construction under this contract took place between 1961 and 1967. This boiler was commissioned in May 1966.
 - Following construction of the boilers ICAL was required to remain at the Vales Point Power Station for a further 12 months in accordance with the contractual maintenance period. Further, ICAL performed repairs and maintenance upon the boilers at Vales Point at various dates outside the contractual period and up to April 1969.

Power Technologies Pty Limited remained on site at the Vales Point Power Station in 1967 when the Plaintiff worked at Vales Point and up to 1970. Eraring refers to the decision of His Honour Judge Curtis in the matter of *Power Technologies Pty Limited v Vero Insurance Pty Limited (re Barlow)* [2009] NSWDDT 21. At paragraph 4:

"Mr Bilbow was in 1967 employed by ICAL to work as a commissioning engineer, and later resident engineer, at the Vales Point power station. In 1970 he was transferred to Munmorah power station as senior commissioning engineer where he remained until 1974..."

In addition, Eraring notes that activity under contract 1004 for boiler 4 continued up to at least April 1969. Accordingly ICAL Power Technologies remained on site at the Vales Point Power Station during the period of the Plaintiff's employment at the power station.

Power Technologies required or stipulated that such boilers and associated plant be insulated, sealed and/or packed with products containing asbestos dust and fibre.

Eraring refers to the following attached documents evidencing the role of Power Technologies and its use of asbestos insulation products at the Vales Point Power Station:

- Copy of formal parts of contract 796 between ICAL and Elcom dated 29 June 1960 (Attachment "44")
- Copy of letter from Elcom to ICAL dated 21 December 1961 confirming contract 1004 (Attachment "45");
- Copy of letter from ICAL to Elcom dated 26 January 1962 detailing ICAL's use of K-Lite and Caposite for the insulation of the Boiler Skin Casing under Contract 1004 (Attachment "46");
- Copy of letter from ICAL to Elcom dated 23 August 1962 attaching copies of order on James Hardie & Coy Pty Limited for insulating material under Contract 1004 (Attachment "47");
- Copy of letter from ICAL to Elcom dated 15 November 1963 enclosing orders on subcontractors including Bells Asbestos & Engineering (now known as Wallaby Grip Limited) for lagging under contract 1004 (Attachment "48");
- Copy of letter from ICAL to Bells dated 13 November 1963 re order for the "supply of all material, labour, gear and scaffolding to carry out the lagging of all saturated steam tubes..." under Contract 1004 with attached lagging specification (Attachment "49");
- Copy of letter from ICAL to James Walker & CO dated 14 March 1969 for the supply and delivery of gasket material under Contract 1004 to be delivered in March 1969 (G1002) (Attachment "50");

18. The basis for PT being an occupier according to EE is that it *"occupied construction sites within the power stations and had its own site offices, store areas, resident engineers and supervisors and controlled its own staff, sub-contractors and work practices within its own construction sites. Accordingly, Power Technologies was an occupier of the power station.*

Power Technologies should be classified as an occupier of the power station during its period of construction given its control over the power station construction site during the period of the [deceased's] employment." The period of occupation asserted by EE was until one year after the commissioning of the last boiler plant in 1966.

19. PT concedes that it was involved in the construction of four bitumen coal boilers at the Vales Point Power Station, those being Units 1, 2, 3 and 4 which were commissioned in 1963, 1964 (x 2) and 1965 respectively. Two further boilers, being Units 5 and 6, were commissioned in 1978 and 1979 respectively. No asbestos was used in connection with the construction of boiler units 5 and 6.
20. PT says that any lagging work was completed prior to the plaintiff's arrival at Vales Point on 10 October 1965. In my view, the evidence does not support that at the relevant time that the plaintiff worked at Vales Point, although they were undoubtedly present on the site carrying out subcontract work as an incident of the contract whereby they were commissioning the relevant boilers, that they were relevantly an occupier. Whilst no doubt they had a degree of autonomy about how they went about the work, they were on the premises of EE and were subject to its control and direction in accordance with contractual and common law principles.
21. Alstom has been sued and is a Category 1 employer. Under Contract 797 dated on or about 1960, Alstom, previously known as the English Electric Company of Australia Pty Ltd, contracted to Elcom to design, construct and install turbines 1 to 3 at the Vales Point Power Station.

22. Rexel Australia, the sixth cross defendant, is also a Category 1 defendant for the work it did in relation to the design, construction and installation of turbine no. 4 and associated plant at Vales Point Power Station.
23. EE alleges that the boilers and associated plant at the Wallerawang, Wangi and Vales Point Power Stations were insulated, sealed and/or packed with asbestos products manufactured by Hardies. EE has attached extracts from the James Hardie product brochures evidencing extensive use of Hardie's products at Wangi.
24. EE further submits that the contract entered into between its predecessors and BIL/BAL at Wangi Power Station required the boilers and associated plant to continue to be insulated, sealed and/or packed with products containing asbestos dust and fibre throughout the operating life of the boilers.
25. WG provided, supplied and/or installed asbestos products for the boilers, turbines and associated steam plant installed at Wallerawang, Wangi and Vales Point Power Stations, noting WG's role as subcontractors to Babcocks in insulating the main steam lines at Wangi and the use of its products by RR on the boilers at Wallerawang Power Station and it is a subcontractor to Stewarts and Lloyds under Contract 1280 for the steam mains and headers at Wangi.
26. EE also relies on WG's role in relation to ICAL at Vales Point where WG subcontracted to perform lagging under Contract 1004 of all saturated steam tubes.

27. It is clear from the defendant's reply that all of the cross defendants nominated were major players in the manufacture, dissemination and use of asbestos products.
28. It is clear from the various replies that have been filed that all of the cross defendants were substantial, large, commercial enterprises that have been operating either as international principals or employing Australian subsidiaries which were substantially if not wholly owned and/or controlled.
29. The knowledge of those companies has been substantially canvassed and reproduced in the materials filed in the various replies, for example the judgment of Curtis J in *Babcock Australia Ltd v Eraring Energy* [2001] NSWDDT 5 reproduced in the eighth and ninth cross defendants' reply.
30. It is also clear that , as I have found, EE was a Category 1 defendant and its own knowledge at times relevant to the deceased's exposure was extensive. WG submits that the standard presumption should be varied in relation to EE to take into account its actual knowledge of the dangers of asbestos since at least February 1964 based on Memoranda B7 and B8 from EE's Standard List of Documents filed on 10 July 2001. EE's own medical officer at the time in 1964 was aware that "*staff working on dry lagging are liable to inhale injurious dust*".
31. In my view, it is probable that the defendant and the cross defendants all had actual knowledge of the dangers of asbestos at the time the deceased commenced his employment or alternatively their predecessors or parent companies did. The Asbestos Regulations in the United Kingdom were promulgated in 1932 and all of the English asbestos manufacturers would have been aware of those regulations. James

Hardie & Coy Pty Ltd was in a similar position, particularly after the introduction of legislation in Victoria in the mid 1950s concerning controlling dust in industry.

32. Despite submissions from a number of the cross defendants, I am not persuaded that Hardies or Alstom or indeed any of the other cross defendants or EE were in a better or worse position that would justify me in varying or apportioning culpability.
33. Complex and no doubt difficult calculations have been prepared in the submissions in relation to the liability of various cross defendants for various periods. The defendant EE has submitted that regarding the period of exposure by the deceased in EE's employment, only the period up until December 1975 should be considered. The deceased's statement of particulars filed on 6 September 2011 sets out his exposure in the employment of the defendant from his commencement there on 5 August 1964:

My duties were that of cleaner/labourer. Part of Wallerawang was operational when I arrived, however the number 4 boiler house in "A" station was still under construction and about to go into service. Wallerawang was a very dusty place. When the westerly winds passed through they would blow the dust which had accumulated everywhere.

There were many different trades working at the Wallerawang. There were riggers, fitters, bricklayers and ladders. Additionally, we all worked in close proximity. At any one point I was worked beside or below these tradesman as they performed their duties. As a labourer I assisted all of them. However I was particularly interested in the activities of the ladders.

On occasions I helped the ladders with the lagging of the pipes. As a cleaner/maintenance man, I did whatever was required and attended to all sections of the power plant. I frequently worked besides the ladders. I recall seeing them tip bags of asbestos fibre into large drums, add water and create a slurry. The tipping of the asbestos fibres created dust around me; they would apply this slurry to the sections of steam pipes using their hands and trowels. The lagging would then be secured in place with cloth or chicken wire.

There were always so many different processes going on that different types of tradesmen worked in an immediate vicinity to one-another.

Tradesmen would often remove the lagging from sections of pipe so that repairs could be undertaken. This process created much dust, as they would remove the lagging with hammers, chisels or simply by hand. No precautions were given or heeded. The fitters would carry out the repairs and then the ladders would reapply the lagging on the affected section of pipe.

My duties were really to do whatever was expected of me. I also tried to keep the area clean by sweeping up and collecting the off-cuts of asbestos. There was whitish dust on every surface. The place was covered in dust.

Whilst I was employed there, I obtained the privilege to be admitted to an assistant operator's course. It involved a great deal of stress. The intake for the course was about 50 people, but only about 20 people ordinarily passed. It was a three months course and was extremely onerous. These were men who were selected from all over Elcom and they were considered the 'cream of the crop'. The course involved varying degrees and levels. The hardest level was the general services. They took anyone who showed potential and trained them in primary role of station operation. The course covered electricity, combustion, generators (electric), power generators. The pass rate was 85%.

After I did the course, I returned to my employment as a cleaner/labourer and I waited for a vacancy. Within months I had got a promotion which involved a transfer to Wangi Power Station as an auxiliary plant attendant (APA). I started there on 5 August 1964.

At Wangi Power Station I was basically employed to perform the same duties as those performed at Wallerawang Power Station. I had two roles; my duties were still classed as a cleaner/labourer, but I was acting as an APA when required. As an auxiliary plant attendant I was responsible for the maintenance and oversight of the boiler house and turbines to ensure they were operating and running smoothly. The boiler house was shut down from time to time so that maintenance work could be carried out. The boiler was lagged with asbestos.

As a general cleaner, I returned to the duties outlined before, working beside ladders, boilermakers and fitters. Again I was exposed to asbestos as outlined above.

Maintenance on the boilers involved the removal and reapplication of asbestos lagging. There were many people working on the boilers during maintenance and shut down work. As an APA I was partly responsible to ensure this operation ran smoothly. I was in the immediate vicinity when the lagging was removed and reapplied. I often helped clean it up. There would be dust everywhere. The overriding responsibility for the boiler house shut-down rested with the shift engineer. However I still had to ensure that everything went well.

I then worked at Vales Point Power Station. I progressed through grades at Vales Point Power Station, from "A" to "B" station. My exposure to asbestos remained the same here as it was at Wangi Power Station. It remained the same until I left this employment.

As a general cleaner, I returned to the duties outlined before, working beside ladders, boilermakers and fitters. Again I was exposed to asbestos as outlined above.

Maintenance on the boilers involved the removal and reapplication of asbestos lagging. There were many people working on the- boilers during maintenance and shut down work. As an APA I was partly responsible to ensure this operation ran smoothly. I was in the immediate vicinity when the lagging was removed and reapplied. I often helped clean it up. There would be dust everywhere. The overriding responsibility for the boiler house shut-down rested with the shift engineer. However I still had to ensure that everything went well.

I then worked at Vales Point Power Station. I progressed through grades at Vales Point Power Station, from "A" to "B" station. My exposure to asbestos remained the same here as it was at Wangi Power Station. It remained the same until I left this employment.

34. Notwithstanding EE's submission I am of the view that I have to assume that the deceased remained exposed to asbestos until the conclusion of his employment. However, it would appear that the deceased worked on the site in or about December 1987. I have therefore adopted a time on risk weighted approach for formulating the assessment in this matter as follows.

Employment Period - Eraring

Period	Power Station	Exposure Periods
B1	Wallerawang	10/5/1963 to 2/8/1964
		31/8/1965 to 29/10/1965
		30/10/1965 to 9/10/1966
B2	Wangi	3/8/1964 to 29/11/1964
		30/11/1964 to 11/7/1965
C1	Vales Point	10/10/1966 to 31/12/1978
C2	Vales Point	1/1/1979 to 5/12/1987

- a) **EMPLOYMENT 1** - at Wallerawang power station from 10 May 1963 to 2 August 1964 ("**First Wallerawang period**") falls within Period B - **15 months of exposure**.

b) **EMPLOYMENT 2** - at Wangi power station from 3 August 1964 to 11 July 1965 (“Wangi period”) falls within Period B - **11 months of alleged exposure**.

c) **EMPLOYMENT 3** - at Wallerawang power station from 31 August 1965 to 9 October 1966 (“Second Wallerawang period”) falls within Period B - **13 months of exposure**.

d) **EMPLOYMENT 4** - at Vales Point power station from 10 October 1966 to 5 December 1987 (“Vales Point period”) falls within Period B and Period C - **254 months of exposure** - as follows:

- PERIOD B / EMPLOYMENT 4a: 10 October 1966 to 31 December 1978 - being **147 months of exposure**
 - PERIOD C / EMPLOYMENT 4b: 1 January 1979 to **5 December 1987** - being **107 months of exposure**
- i.e. TOTAL = 254 months of exposure**

Consequently, the total period of employment is **293 months**. The percentage of each employment as a total of Mr Farrow’s total employment is as follows:

- a) **EMPLOYMENT 1 (Period B) - 15 months of 293 months = 5%**
- b) **EMPLOYMENT 2 (Period B) - 11 months of 293 months = 4%**
- c) **EMPLOYMENT 3 (Period B) - 13 months of 293 months = 4%**
- d) **EMPLOYMENT 4a (Period B) - 147 months of 293 months = 50%**
- e) **EMPLOYMENT 4b (Period C) - 107 months of 293 months = 37%**

Further, in this matter **Period A, Period B** and **Period C** (as prescribed by the Dust Diseases Tribunal (Standard Presumption - Apportionment) Order 2007 (“the Order”)) are the relevant periods in relation to apportionment. For the reasons explained above, liability between Category 1 and Category 2 defendants for Period B and Period C should be apportioned as follows (with a 20% variation liability to Category 2) as follows:

Period B	Percentage of claim to be apportioned between Category 1 defendants:	65%
	Percentage of claim to be apportioned between Category 2 defendants:	35%
Period C	Percentage of claim to be apportioned between Category 1 defendants:	60%
	Percentage of claim to be apportioned between Category 2 defendants:	40%

As a result of the Claimant’s claim against EE, and EE’s and Amaca’s cross-claims, the following parties are relevant to the following periods of Mr Farrow’s employment:

- **First Wallerawang period:** EE, Rolls-Royce, Amaca, WGL, WGNSW;
- **Wangi period:** EE, BIL, BAL, Amaca, WGL and WGNSW;
- **Second Wallerawang period:** EE, Rolls-Royce, Amaca, WGL, WGNSW;
- **Vales Point period:** EE, ICAL, Alstom, Rexel, Amaca, WGL and WGNSW.

Apportionment

Apportionment of liability in relation to Mr Farrow's alleged exposure (further to the submissions made above) should be apportioned (which is not admitted) as follows:

a) **EMPLOYMENT 1** - at Wallerawang power station from 10 May 1963 to 2 August 1964 ("First Wallerawang period") falls within Period B - **15 months of exposure or 5% of total employment**

The parties in relation to which apportionment may be made are:

- EE
- Rolls Royce
- Amaca
- WGL
- WGNSW

Party	Category 1 (65%)	Category 2 (35%)	Percentage of 5%
EE	13%	35%	2.4% (1.75 + 0.65)
Rolls-Royce	13%		0.65%
Amaca	13%		0.65%
WGL	13%		0.65%
WGNSW	13%		0.65%
Sub - Total	65%	35%	5%

b) **EMPLOYMENT 2** - at Wangi power station from 3 August 1964 to 11 July 1965 ("Wangi period") falls within Period B - **11 months of alleged exposure or 4% total employment**

The parties in relation to which apportionment may be made are:

- EE
- BIL
- BAL
- Amaca
- WGL
- WGNSW

Party	Category 1 (65%)	Category 2 (35%)	Percentage of 4%
EE	10.83%	35%	1.83% (0.43 + 1.4)

BIL	10.83%		0.43%
BAL	10.83%		0.43%
Amaca	10.83%		0.43%
WGL	10.83%		0.43%
WGNSW	10.83%		0.43%
Sub - Total	65%	35%	4%

c) **EMPLOYMENT 3** - at Wallerawang power station from 31 August 1965 to 9 October 1966 ("**Second Wallerawang period**") falls within Period B - **13 months of exposure** or **4% of total employment**

The parties in relation to which apportionment may be made are:

- EE
- Rolls Royce
- Amaca
- WGL
- WGNSW

Party	Category 1 (65%)	Category 2 (35%)	Percentage of 4%
EE	13%	35%	1.92% (0.52 + 1.40)
Rolls-Royce	13%		0.52%
Amaca	13%		0.52%
WGL	13%		0.52%
WGNSW	13%		0.52%
Sub - Total	65%	35%	4%

d) **EMPLOYMENT 4** - at Vales Point power station from 10 October 1966 to 5 December 1987 ("**Vales Point period**") falls within Period B and Period C - **254 months of exposure** - as follows:

- PERIOD B / EMPLOYMENT 4a: 10 October 1966 to 31 December 1978 - being **147 months of exposure**

- PERIOD C / EMPLOYMENT 4b: 1 January 1979 to 5 November 1988 - being **107 months of exposure**
i.e. **TOTAL = 254 months of exposure**

The parties in relation to which apportionment may be made are:

- EE
- ICAL
- Alstom
- Rexel
- Amaca
- WGL
- WGNSW

i) PERIOD B / EMPLOYMENT 4a: 10 October 1966 to 31 December 1978 - being **147 months of exposure** or **50% of total employment**

Party	Category 1 (65%)	Category 2 (35%)	Percentage of 50%
EE	4.64%	35%	22.16% (4.64+ 17.5)
ICAL	4.64%		4.64%
Alstom	4.64%		4.64%
Rexel	4.64%		4.64%
Amaca	4.64%		4.64%
WGL	4.64%		4.64%
WGNSW	4.64%		4.64%
Sub - Total	65%	17.5%	50%

ii) PERIOD C / EMPLOYMENT 4b: 1 January 1979 to 5 December 1987 - being **107 months of exposure** or **37% of total employment**

Party	Category 1 (60%)	Category 2 (40%)	Percentage of 37%
EE	3.17%	40%	17.98% (3.17 + 14.8)
ICAL	3.17%		3.17%
Alstom	3.17%		3.17%
Rexel	3.17%		3.17%
Amaca	3.17%		3.17%

WGL	3.17%		3.17%
WGNSW	3.17%		3.17%
Sub - Total	22.2%	14.8%	37%

TOTAL OF APPORTIONMENTS FOR EMPLOYMENT 1, 2, 3 and 4 ADDED TOGETHER:

Party	Employ 1 Wallerawang	Employ 2 Wangi	Employ 3 Wallerawang	Employ 4a Vales Point	Employ 4b Vales Point	TOTAL
EE	2.4%	1.83%	1.92%	22.16%	17.97%	46.28%
Rolls Royce	0.65%		0.52%			1.17%
BIL		0.43%				0.43%
BAL		0.43%				0.43%
Amaca	0.65%	0.43%	0.52%	4.64%	3.17%	9.41%
WG	0.65%	0.43%	0.52%	4.64%	3.17%	9.41%
WGNSW	0.65%	0.43%	0.52%	4.64%	3.17%	9.41%
ICAL				4.64%	3.17%	7.81%
Alstom				4.64%	3.17%	7.81%
Rexel				4.64%	3.17%	7.81%
Total	5%	4%	4%	50%	37%	100%

FINAL APPORTIONMENT:

Party	TOTAL
EE	46.28%
Rolls Royce	1.18%
BIL	0.44%
BAL	0.44%
Amaca	9.41%
WGL	9.41%
WGNSW	9.41%
ICAL	7.81%
Alstom	7.81%
Rexel	7.81%
Total	100%

101. I note that I decline to vary the apportionments for any of the cross defendants for any particular period, although I have shortened the last period to coincide with the deceased's last exposure. I should note that there is a reference in the eighth and ninth cross defendants' reply to the first cross claim to CSR. I do not have any material relating to CSR and I have omitted them from the assessment.

102. I have also chosen to treat BIL and BAL as separate entities and have accepted the submission that their knowledge of asbestos was coextensive having regard to the nature of the parent company and the

novation of contracts from one to the other, their extensive common board of directors and their common management.

103. I have also treated the Wallaby Grip entities as separate entities rather than amalgamating them.

104. Having regard to the overall responsibility of the defendant, I appoint the defendant the Single Claims Manager.

Dated 17th day of NOVEMBER 2011

PAUL BLACKET SC
CONTRIBUTIONS ASSESSOR.

A handwritten signature in black ink, appearing to read 'Paul Blackett', written in a cursive style.