CITATION: *Inquest into the death of Darryll Stuart Davis* [2008] NTMC 31

TITLE OF COURT:	Coroner's Court
JURISDICTION:	Darwin
FILE NO(s):	D0098/2006
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HEARING DATE(s):	23 October 2007 24 October 2007 25 October 2007
FINDING OF:	Mr Greg Cavanagh SM
CATCHWORDS:	**Unexpected death, Electrocution, Electric work at and in remote residential homes, safety practices.**

REPRESENTATION:

Counsel:

Assisting:	Ms Jodi Truman

Judgment category classification:	B
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IN THE CORONERS COURT
AT DARWIN IN THE NORTHERN
TERRITORY OF AUSTRALIA

No. D0098/2006

In the matter of an Inquest into the death of

DARRYLL STUART DAVIS
ON 30 JUNE 2006
AT Ngukurr Community
Ngukurr NT

FINDINGS

(Delivered 2 May 2008)

Mr Greg Cavanagh SM:

Introduction

1. Darryll Stuart Davis ("the deceased") was a Caucasian male born on 25 August 1967 in Temora, NSW. Mr Davis died sometime between 3.30pm and 5.00pm on Friday 30 June 2006 on the roof of Lot 246, Mundulooloo Street, Ngukurr Community in the Northern Territory.

2. At the time of his death, the deceased was a self-employed electrician. He had completed his apprenticeship in February of 1990 and had run his own business for approximately 10 years. He had been working in the Ngukurr Community on and off for the last 5 or 6 years. He lived in Darwin with his wife and family and would travel to the Ngukurr Community when required, at which time he would live on site.

3. At the time of death, the deceased was contracted by the Yugul Mangi Community Council as a sub-contractor to repair electrical installations on the Community, which included repairs and servicing of the Sun Saver 180 Litre Low Pressure Powered Boosted Hot Water Service, which is fitted to a large number of houses within the Community, including Lot 246, where the death of the deceased occurred.

4. Ms Jodi Truman appeared as counsel assisting on each day of this Inquest from 23 to 25 October 2007. There were no other formal appearances, although it is noted that the wife of the deceased and members of his extended family were in attendance at each day of the Inquest.

FORMAL FINDINGS

5. Pursuant to section 34 of the Coroner's Act ("the Act"), I find, as a result of evidence educed at the public inquest as follows:

   i. The identity of the deceased person was Darryll Stuart Davis born 25 August 1967. The deceased resided at 125 Virginia Road, Howard Springs NT.

   ii. The time and place of death was outside Lot 246, Mundulooloo Street, Ngukurr Community, sometime between 3.30pm and 5.00pm on Friday 30 June 2006.

   iii. The cause of death was electrocution.

   iv. Particulars required to register the death:

      a. The deceased was male.

      b. The deceased name was Darryll Stuart Davis.

      c. The deceased was of Caucasian descent.

      d. The cause of death was reported to the Coroner.

      e. The cause of death was confirmed by post mortem examination carried out by Dr Terry Sinton.

      f. The deceased's mother was Beverley Joyce Davis. The deceased's father was Leigh William Davis.

g. The deceased lived at Lot 2909 Virginia Road, Howard Springs, Northern territory.

h. The deceased was a self employed Electrician

i. The deceased was married to Elice Dungey

CIRCUMSTANCES SURROUNDING DEATH

6. The deceased was a 38-year-old male who was a self-employed electrician. He had completed his apprenticeship on or about 7 February of 1990 and had run his own business for approximately 10 years.

7. He had been working in the Ngukurr Community on and off for the last 5 or 6 years. He had lived in Darwin with his wife and family and would travel to the Ngukurr Community when required, at which time he would live on site at a council donga. He was contracted by the Yugul Mangi Community Council as a sub-contractor to repair electrical installations on the Community which included repairs and servicing of the Sun Saver 180 Litre Low Pressure Powered Boosted Hot Water Service, which is fitted to a large number of houses within the Community, including Lot 246, where the death of the deceased occurred.

8. It appears on the evidence that the deceased also undertook work for the Ngukurr Community Store.

9. The deceased had not been in the Ngukurr Community for some time and had arrived in the Community on or about Monday 26 June 2006. The deceased was staying in a council "donga" with a Mr Max Arthur Warke, who was employed as an Essential Services Officer for the Yugul Mangi Community Council in Ngukurr. Both Mr Warke and the deceased knew each other well and had worked together extensively in the 5 or 6 years that they had been working at the Ngukurr Community.

10. The Mundulooloo Street property was built some time ago; there was no exact record of when it was built in evidence before this Inquest. Lot 246 Mundulooloo Street was one of many Housing Commission residences equipped with a Sun Saver 180 Litre Low Pressure Powered Boosted Hot Water Service in the Community.

11. At the time of the accident there were in fact 2 Hot Water Services on the roof of Lot 246, both of these were Sun Saver 180 Litre Low Pressure Powered Boosted Solar Hot Water Services. The electrical control system for those services consisted of as follows:

    i. An "Over Temperature Cut Out";

    ii. Temperature Control Thermostat;

    iii. 4.8 Kilowatt 240 Volt Heating Element;

    iv. A Terminal Block and Inter Connecting Wire.

12. Each unit was wired separately to the house and were not connected electrically in any way, and operated independently from one another.

13. The original Hot Water Service had been installed on the property when the house was first built. A second Hot Water Service was added to the property in or about 1998 when extensions were added to the house. The additional Hot Water Service received electrical power from a separate electrical circuit to the original Hot Water Service. The circuit breaker for the original Hot Water Service was located on the circuit breaker panel in the passage hallway of Lot 246. It was the 3rd circuit breaker from the left on the panel. The circuit breaker for the second Hot Water Service was also located on the circuit breaker panel in the passage hallway; It was the last circuit breaker on the right of the panel.

14. Information from the occupants of the house was to the effect that the Hot Water Service systems were not working in the house and that in fact no water at all was coming out of the hot water taps.

15. Lot 246 was occupied at the time by Edward Tapau, his wife Vanessa Thompson-Watson and their child Solomon. They had resided there for a number of months prior to the deceased's death. Also residing at that residence with them was Edna Andrews and her husband William Joshua and their 2 children Brian and Fiona. In addition, Mr Tapau's little brother, Muslem Hammond would often visit, as would his niece, Marissa Morton, and both would occasionally reside in the home. Both Muslem and Marissa were present at the house on 30 June 2006.

16. Both Mr Tapau and Ms Thompson-Watson gave evidence that ever since they had lived in the house, there had been no hot water. They both gave evidence that even when the hot water tap was turned on, nothing, not even water, would flow from the tap.

Events of 30 June 2006

17. Evidence was given by Max Warke that on the morning of Friday 30 June 2006 he was sharing the council "donga" with the deceased. The previous night he recalls seeing the deceased go to bed at about 10.00pm. He reports that they had had a quiet night, and that he had not seen the deceased have anything alcoholic to drink.

18. Mr Warke recalls the deceased waking in the morning and that the 2 had breakfast together around 7am and then went their separate ways to work. They did not work on anything together that day and he did not know what work the deceased was undertaking for the day. He recalls seeing the deceased again at approximately 12 noon at the "donga" where they had lunch and stayed at the premises for approximately 30 minutes and then again went their separate ways.

19. Mr Tapau gave evidence that between 3.00pm and 4.00pm he was in the kitchen of Lot 246 preparing an early supper. Mr Tapau recalls cooking in an electric fry pan. He stated in his evidence that he was also using the stove to cook rice. Whilst he was cooking he saw a white Toyota motor vehicle come into the yard of Lot 246 and park. He knew the deceased and recognised it was the vehicle of the deceased.

20. Present at Lot 246 at the relevant time were Mr Tapau, Ms Thompson-Watson, Muslem Hammond, Merissa Morton and the infant child Solomon.

21. Mr Tapau recalls walking out onto the front veranda of Lot 246 and going down the stairs. He spoke with the deceased outside, just beyond the veranda. Mr Tapau had known the deceased for a number of years and spoke with the deceased recalling a conversation, taking place near the stairs of the front veranda of the residence.

22. Mr Tapau gave evidence that the deceased asked him if the hot water was working and he told the deceased it was not. The deceased told Mr Tapau he was going to have a look at the hot water system. Mr Tapau gave evidence that he asked the deceased if he wanted him to turn off the power to the hot water system and the deceased replied with words to the effect of "no, I'm just going to have a look at it".

23. Mr Tapau states that he then re-entered the house and the deceased went about his work.

24. Mr Tapau states that the deceased did not enter the home at that time and did not call upon Mr Tapau to switch the power off.

25. Mr Tapau stated in his evidence that after he re-entered the house, he finished cooking the supper. Once he had done that, he then went to the circuit breaker panel and switched off the circuit breaker for what he thought was the switch for the hot water system. Mr Tapau stated that at the

time he thought there was only one switch for the hot water system and that was the one he turned off. He stated in his evidence that since the death of the deceased he has discovered that there were in fact 2 switches for the hot water system at his home, however he only switched off one, which was the last switch on the panel marked in texta "HWS", ie hot water service.

26. Mr Tapau became visibly upset when giving his evidence. He stated that he considered the deceased to have been a very close friend. Ms Thompson-Watson gave evidence to the same effect that the deceased was a person considered to be a close friend to her husband.

27. Mr Tapau's evidence however about having turned the switch off for the hot water service was not in accordance with the statutory declaration that he gave to police which is set out in exhibit 2 of the Coronial File prepared by police for the purpose of this Inquest. Mr Tapau had provided a statutory declaration to police some 6 days after the death of the deceased on 6 July 2006. Within that statutory declaration, Mr Tapau stated to police at paragraph 20 that he did not touch the power board whilst the deceased was on the roof. His evidence in the witness box was in stark contrast to this statement. I will refer to this later in these findings.

28. Mr Tapau states that he, Ms Thompson-Watson, Muslem and Marissa were all in the kitchen area eating supper. He states that at that time there were lights on in the house, and fans. He also stated there was a television on in the house. Mr Tapau gave evidence that whilst he was eating he heard a child, namely Bronwyn Turner, calling out to him. Mr Tapau states that he went outside and spoke to Bronwyn Turner who told him there was a "white fella" asleep on the roof.

29. It is important to note that 2 of the other occupants of the house gave evidence at this Inquest, viz both Ms Thompson-Watson and the child, Marissa Morton, gave evidence. It had been the intention of this Inquest to also hear from Muslem Hammond, however the Inquest was told that police

had endeavoured to bring Master Hammond to the Inquest but were unable to do so as Master Hammond was undergoing "men's business" (had been so for some time, and was unable to appear). Master Hammond gave a recorded statement to police however on 11 December 2006 and it is also attached to the Coronial File, being exhibit 2.

30. Ms Thompson-Watson gave evidence that she also recalled hearing persons yelling from outside. Master Hammond's statutory declaration also refers to this.

31. Ms Thompson-Watson stated in her evidence that she was in her bedroom with her infant child Solomon when the deceased arrived and she did not see him. She was simply told of his presence by Mr Tapau. She gave evidence that she did not see the deceased enter into the house at any time, nor did she hear any conversation between the deceased and Mr Tapau. She further stated that at no time did she see any occupant go near the circuit breaker panel, including Mr Tapau. She stated that whilst the deceased was there, the lights and fans were on in the house and so too was a television.

32. Marissa Morton also gave evidence. She stated that she remembered the deceased attending the house. She knew the deceased and his name was Darryll. It is important to note that Marissa is a 12-year-old child. She was understandably nervous when she gave evidence at this Inquest. She stated that she was eating in the kitchen with the family when the deceased arrived. Mr Tapau had been the one cooking and she saw him use the electric frypan. She gave evidence that she did not see the deceased enter the house and she did not see any person go near the power box. She gave evidence that she did not hear anyone talk about the power. This aspect of her evidence is contrary to her recorded statement to police. Marissa also stated that she could only recall talking to the police once.

33. Senior Constable George Watkinson had given evidence that Marissa had been spoken to on a number of occasions prior to her giving a recorded statement and on each of those occasions she had stated that the deceased had never entered the house, and that there was no conversation that she heard about electricity. HOWEVER, Senior Constable Watkinson gave evidence that during the giving of her recorded statement Marissa stated for the first time that she had heard the deceased say for "no one to turn on the main power". This statement was given on 11 December 2006 and is recorded and transcribed and is part of the Coronial File. Senior Constable Watkinson stated that he was concerned about this statement as it was contrary to what he had been told earlier, and on a number of occasions, by Marissa. As a result he gave evidence that he attended upon Marissa again, the next day, being 12 December 2006. Senior Constable Watkinson gave evidence that during this second conversation Marissa stated that she had heard no such conversation and that this was only what she thought the deceased would have said

34. The recorded conversation with Master Muslem Hammond is set out in exhibit 2. It also states that at no time did the deceased come in to the house. Muslem also stated that he did not know where the switch was for the power in the house and he gives no evidence of any conversation between Mr Tapau and the deceased about the power.

35. Mr Tapau gave evidence that after hearing Bronwyn yelling out, he walked to the front of his house and could see the deceased's legs. He went back inside and put on his shoes and then climbed the ladder at the front of the house, which had been left by the deceased.

36. When Mr Tapau climbed up onto the roof he could see the deceased lying on his back with his arms out. He saw that there was an orange set of pliers in the deceased's right hand and that there was a red wire going into the pliers. Mr Tapau stated he immediately was in shock and that he knew something

bad had happened. He did not want to go closer to the deceased as he was worried about the electricity.

37. At or about this time Gordon Leonard Hull and Ruth Joshua arrived at Lot 246. Mr Hull also gave evidence at this Inquest. He stated that he had been told that there was a man asleep on the roof of the residence. Mr Hull went to the residence and saw an Aboriginal man climbing the ladder onto the roof and then reeling back. It is clear that this person was Mr Tapau.

38. Mr Tapau stated that he saw the "nurse" from the community come to the house and he told him to go closer to the deceased but Mr Tapau stated he did not want to and went back down the ladder and into the house. Mr Tapau gave evidence that he remained in the house then and told everyone in the house not to move and that something bad had happened on the roof.

39. Mr Hull gave evidence that he climbed the ladder onto the roof. There he saw the deceased laying on his back and also reports a pair of pliers in the deceased's right hand with a wire coming out of the Hot Water Service. Mr Hull stated he picked up one of the covers of the Solar Hot Water System lying on the roof, which he "hoped" was made of fibreglass. He then touched the deceased on the hand with this object very gingerly and knocked the pliers out of the deceased's hand.

40. Mr Hull stated that he did not see any spark from the wire when he did that. Mr Hull reports that he then touched the deceased with the back of his hand to ensure there was no continuing current and once he confirmed there was no current he felt for a pulse. He noted no pulse and no breathing. At this time he yelled out to a fellow witness, who did not give evidence at this inquest, Ms Ruth Joshua, to call the police.

41. Mr Hull then unbuttoned the shirt of the deceased and commenced cardiac compressions. Mr Hull then ceased compressions, raised the sunglasses

from the eyes of the deceased and noted that the deceased's pupils were fixed and dilated. He did not continue with the compressions thereafter.

42. Mr Hull then used his mobile telephone and contacted Mr James Edgar Davidson; a registered nurse employed by Sunrise Health at Ngukurr and requested his assistance. Mr Hull stated that at no time did he enter the house, and he made no personal inquiry as to the power. He stated that he remained on the roof for the majority of the time that he was at the address.

43. Mr Davidson reports arriving at the house in the ambulance. He climbed the ladder and saw the deceased lying on his back with his work shirt unbuttoned. He reports that he did not know the deceased and that the deceased was lying behind a solar hot water system with his head facing south, down the slope of the roof and his feet on the apex of the roof. He approached Mr Hull and the deceased and noted a pair of orange plastic handled pliers lying on the roof close to the right hand of the deceased. He also saw that there was red electrical lead in the jaws of the pliers. Mr Davidson asked Mr Hull if he had undertaken CPR and he'd said that he had. Mr Davidson stated he was concerned about doing anything else on the roof and wished to check the mains power.

44. Mr Davidson went back down the ladder, to the front of the house and spoke with Mr Tapau, who was not known to him at that time. Mr Davidson stated that the family were in the kitchen and they appeared to be having a meal. He asked Mr Tapau if he could have a look at the switchboard and Mr Tapau agreed. Likewise Mr Tapau gave evidence that a "white fellow" (ie. Mr Davidson) came to the front door and he spoke to him. The evidence between Mr Tapau and Mr Davidson differs in relation to what was said. Mr Tapau reports that the man had asked if he had switched the power off to which he responded no. He reports that the "white fellow" then followed him to where the power box was in the hallway, he showed him the power box and the "white fellow" asked him which switch was for the mains. Mr

Tapau reports that he showed him the switch on the left and that he then saw the man pull the switch down and the lights in the house went off.

45. Mr Davidson on the other hand states that he asked Mr Tapau whether he would mind if he had a look at the switchboard, which Mr Tapau agreed. He went into the house through the front living room, come kitchen area. Mr Davidson states that the he realized the mains power was on as the light was still on in the house. Mr Davidson stated that when he looked at the power board there was only one switch in the "off" position, and that was the one that was the last switch to the right hand side. Mr Davidson stated that he spoke with the Aboriginal man and that from what they discussed he "inferred" that this was the only switch that the electrician turned of. Mr Davidson stated that he then switched off the main switch.

46. I pause to note here that Mr Tapau gave evidence that when he was with the "white fellow" at the power box, when the man opened the lid of the power box there was nothing holding it shut. He stated there was no tape, or tag, or anything to keep it shut, it just opened upwards.

47. Mr Davidson then returned to the roof whereupon he saw Mr Hull still with the deceased. A police officer also arrived on the scene, namely Senior Constable George Watkinson. A short time later Mr Max Warke also arrived at the scene after being told of an incident at Lot 246. When Mr Warke arrived at the premises he saw the deceased's vehicle parked in the yard and a ladder leading to the roof. He reported climbing the ladder onto the roof and seeing the deceased lying on his back near the hot water service. He reported that the deceased's head was toward the backyard and his feet were over the ridge of the roof. His shirt was open and there were 2 men and a police officer on the roof. He was told by the police officer that the deceased had died.

48. Mr Warke then arranged for a forklift to attend upon the premises to assist in the removal of the body of the deceased. Mr Warke stated that he went

inside the house to check the circuit breaker box to ensure that all power was switched off. When he entered into the house he saw and recognised Mr Tapau. He went with Mr Tapau to the power box and Mr Tapau used his lighter so that he could see the switches as the house was in darkness.

49. Mr Warke reports that he could see the first 3 circuit breakers from the left in the down position (off) and that these were the mains power, stove and hot water service respectively. Mr Warke reports that Mr Tapau told him that he had only turned off one of the switches, which was the last switch to the right of the power box. Mr Warke stated that this was the hot water service for the second hot water system to the house, and not the one that the deceased was working on. Mr Tapau does not give any evidence of any conversation with either Mr Davidson or Mr Warke at the power board.

50. Mr Warke stated that at that time the remaining circuit breakers were in the up (on) position. Mr Warke reports that he pulled the rest of the circuit breakers down so that everything was switched off.

51. Mr Warke reports that he contacted his supervisor at PAWA who requested that he remove the pole fuse to the house in order to ensure there was no chance of the power being turned back on. Mr Warke undertook that request.

Investigations into the cause

52. It is clear that Mr Warke was deeply disturbed and upset by the death of the deceased who was clearly not just a work mate but a very close friend. He has every sympathy of this court. He reported that during the evening of 30 June 2006 he went over and over in his mind the events of that day attempting to work out in his own mind what had occurred. He reported that he had worked many years with the deceased and that the deceased was very careful. The following morning on 1 July 2006 Mr Warke approached the police and requested to return to the scene, as he believed he might be able

to assist in establishing what the deceased may have been doing at the time of his death.

53. Mr Warke gave evidence that the following morning he and the police officer, Senior Constable George Watkinson, went back to the roof of Lot 246. Mr Warke reports seeing exposed electrical wires and booster components. He states that that indicated to him that the deceased had been in the process of replacing functional parts of the electrical system. Mr Warke further reported that he saw an opened socket set, a multimeter and electrical screwdrivers and pliers. He stated that this suggested to him that the deceased had been replacing a heating element. Upon closer inspection of the hot water service Mr Warke reported seeing that the deceased had fitted a new terminal connection block and that the replacement was complete, except for the connection of the red active wire, which was still in the jaws of the pliers lying on the corrugated iron roof.

54. Mr Warke reported that when testing for element failure, the usual course would have required the deceased to first undertake a voltage test with his multimeter to indicate that the 240 volts supply was reaching the unit. Mr Warke reported that usually the deceased would then have had to go on to testing the resistance in the element. Mr Warke gave evidence that he would then have expected the deceased would have been required to go down the ladder, into the house, and turn off the circuit breaker to the hot water unit. Mr Warke reported that in his usual course, before returning to the roof, the deceased would have told anyone in the house (if they were present) that he had switched off the hot water service.

55. Mr Warke reported that once back on the roof the deceased would have done another voltage test with his multimeter to show that there was no voltage present. The deceased would have then tested the element and found that it had failed. Mr Warke reported that he could see a new element had been fitted and that the old element was lying on the ground at the back of the

house, which gave him the impression that it had been thrown from the roof. Mr Warke believed that the heating element in the back yard was the one that the deceased himself would have removed from the property and had been working on.

56. Mr Warke reported that at this time he anticipated that the deceased would have also seen that the terminal block needed replacing and that in order to replace that element the deceased would have been required to drain the tank to just below the heating element insertion point.

57. Mr Warke reports that when the water reached the correct level the deceased would have then proceeded with the removal of the element by first disconnecting the wiring from the element. At that point in time removal and replacement of the element with a new element would then be undertaken.

58. Mr Warke gave evidence that in order to have replaced the heating element, he believed the deceased would have had to leave the premises and go to the work shed to get the new part. Mr Warke stated that he did not believe that the deceased would have had a new heating element in his vehicle. Mr Warke believed that the deceased would have walked to the work shed to get the part. No occupant gave evidence that they saw the deceased leave the residence.

59. During the time that the deceased was obtaining the part, Mr Warke considered that he would have fitted screw connectors to terminate the conductors in his absence. Mr Warke stated however the he found no evidence of this having been done by the deceased.

60. Mr Warke gave evidence that it was his assumption that at the time of reconnecting the wiring to the working components and terminal block, a person inside the house had returned the hot water service circuit breaker to the on position, thus returning power supply to the circuit yet to be

connected. Thus when the deceased penetrated the active wire with his pliers, whilst removing some of the insulation to enable it to be connected, he has been fatally electrocuted.

61. Mr Warke went on to say that in his experience in working with the deceased that when it has been necessary to isolate the power from the hot water service, the deceased had isolated the power by switching the circuit breaker to the hot water service off "ie. to the down position". That in order to ensure that the circuit breaker was not inadvertently turned back on, the deceased would then normally secure the lid to the circuit breaker panel closed with tape. Mr Warke stated that in relation to metal panel boxes he had seen the deceased use a tech screw by way of using a tech gun, which would screw a tech screw through the lid into the circuit breaker panel to keep it shut, but that with the plastic internal boxes he had seen the deceased simply use gray duct tape.

62. Mr Warke gave evidence that he was aware of "danger" tags but that he had spoken with the deceased in the past about such tags and they did not ordinarily use them as most Aboriginal persons on the community could not understand the English on the tags anyway, so the deceased simply used the duct tape by taping it around the box a number of times and across the front of the box.

63. Mr Warke gave evidence that when he checked the circuit breaker panel the following day on 1 July 2006 with the police officer he saw no hole in the lid, or the panel where a tech screw would have been and he did not see any masking tape, or tags, in the area. Senior Constable Watkinson gave similar evidence and stated that he had also checked many of the places where the deceased was recorded as having worked and found no evidence of tech screws having been used at those addresses.

64. In relation to this issue Mr Tapau gave evidence that he had in fact worked with Mr Warke and the deceased. Mr Tapau, in the giving of his evidence, clearly appeared to understand the danger associated with working with electricity. Mr Tapau gave evidence that when the deceased said he was going to check the system, but did not switch the power off, he assumed that the deceased would switch the power off somewhere else. Mr Tapau gave evidence that some of the hot water systems have a red button on the side in order to switch off the power to that system. He also gave evidence that he had seen the deceased previously switch the power off to the whole of the building from the power pole.

65. Mr Warke also gave evidence that he had heard in the community, but was not sure from whom, that the occupants of the house had to flick the switch on and off at the main switchboard in order to use the stove. Mr Tapau did not agree with this. Nor did Ms Thompson-Watson. Mr Stuart Hudson gave evidence that he had inspected the stove at the house during his investigations and although there was problems with the heating elements having "dropped down", and the doors to the stove not being in place, he was not aware that the stove did not operate properly and was not aware that it was necessary to utilise the main switch in order to operate the stove. He stated that the stove appeared to be able to operate without touching the main switch.

66. At about noon on 1 July 2006 electrical safety unit officer (ESO), Mr Stuart Hudson, attended at the Ngukurr Community after being requested to attend to conduct an investigation. Mr Hudson is an officer from the electrical safety unit of the Department of Planning and Infrastructure. At the time of his investigation he had been with the electrical safety unit of the Department of Planning and Infrastructure for 3 months. He had however been a qualified electrician since 1980 or so, and had undertaken his apprenticeship prior to that. Mr Hudson gave evidence that he also had

experience of working out in Aboriginal communities, in particular in the Jabiru area.

67. Mr Hudson undertook an investigation, and as a result of his investigation prepared a 23-page report. That report forms part of exhibit 2. Mr Hudson reported that upon inspection of the main switch board:

i. The main switch was in the off position;

ii. The cover was in place and the circuit breakers were all in off position;

iii. There was no evidence of a locking mechanism or screw holes in the cover;

iv. There was no evidence of danger tags or similar;

v. The switch and circuit breakers were marked with the type of circuits they supplied;

vi. The switch and circuit breakers from left to right were marked main switch, stove, hot water, power, power, light, HWS (hot water service); and

vii. The hot water circuit breakers were not marked to indicate which hot water booster they supplied.

68. Mr Hudson noted, quite properly, that there were conflicting statements as to the position of the circuit breakers immediately after the incident.

69. Mr Hudson also accessed the roof and inspected the scene and the tools and equipment apparently used by the deceased. Essentially Mr Hudson noted that the tools were consistent with an electrician carrying out maintenance on a solar hot water service. He stated that the heating element appeared to be new or a very recent replacement and that this could have been an

element that had been replaced by the deceased during the course of his repair.

70. Mr Hudson gave evidence that there was an old heating element found in the back yard. He stated he was unable to say if this was the heating element that had been replaced by the deceased. Senior Constable Watkinson gave evidence that he investigated whether there were any other houses in the vicinity that were having work carried out on them related to the heating elements. He found no such works in the area other than at Lot 246. Mr Warke also gave evidence that he believed that this heating element found in the back yard was the one replaced by the deceased.

71. Mr Hudson stated that he found the multimeter lying near where the deceased was found was still in its case with the leads packed away. Mr Hudson stated in evidence that this was not how he expected to find a multimeter if it was being used by an individual whilst carrying out their work. Mr Warke stated however that the deceased very often would pack away his multimeter during a job even if this meant he did it a number of times. Mr Hudson removed the multimeter from its case and turned it on to the continuity position and that the unit tested correctly. Mr Hudson subsequently undertook further testing of the multimeter and found that it functioned correctly.

72. Mr Hudson reported receiving information from the police that an inspection of the personal items belonging to the deceased had not been able to find any danger tags amongst them. It is important to note here that Mr Warke stated that as part of his employment, the deceased was required to supply all his own items, including tags and/or any other equipment. Mr Warke stated the only item supplied by the council to the deceased was his accommodation in the donga.

73. Mr Hudson also reported conducting a visual inspection of the pliers reported as used by the deceased. Mr Hudson reported that there was no

signs of arcing found on the pliers and noted that the insulation on the pliers was in poor condition with cracks in the insulation. Mr Hudson reported that if the deceased was conducting any live testing, the safety standards required that the deceased use pliers, which were properly insulated.

74. Mr Hudson reported that in his opinion the deceased had failed to comply with the requirements of the Electricity Reform Act, the Electricity Reform (Safety and Technical) Regulations or the AS/NZF 4836:2001 Safe Working on Low Voltage Electrical Installation. In particular Mr Hudson found that the failures were in relation to there being no evidence of an isolation having been undertaken to the electrical equipment which would then have required a deliberate action to energise the relevant part of the installation. Mr Hudson stated that the deceased would have been aware of these rules either through his initial training or subsequent training.

75. Mr Hudson gave evidence that in order to properly isolate that equipment he would have expected the deceased to either have "locked out" the main switch board; remove the cable to the switch board; or to have removed the connector to the circuit breaker. Mr Hudson stated that simply turning off the circuit breaker without more was not sufficient, or to use his words "not good enough".

76. Mr Hudson stated that there was no evidence that the deceased had complied with the safety standard provisions of "*AS/NZS 4836:2001 Safe Working on low voltage electrical installations*". In particular that there was no evidence of the locking off, or isolating of the equipment by either the turning off of the circuit breaker, the removal of the fuse/link/cable or connector to the circuit breaker, or any other lock out system.

77. Although the provisions of the standard refer to the isolation being "locked off where possible", Mr Hudson stated that even in this situation it was possible for there to have been a "locking off" in some manner beyond simply turning the switch off.

78. Mr Hudson stated that he was aware that from his own experience that in some Aboriginal communities, electrical workers did not use the "danger" tags because of the inability for people in the community to read English, however he stated that simply using duct tape or electrical tape was "cutting corners" and did not comply with the Australian safety standards.

79. Mr Hudson stated in his report that in his opinion the causation of the electrocution of the deceased could be attributed to 3 possible causes:

    i. The inadequate identification of the circuit breakers at the switchboard.

    ii. That an "unknown person or persons" turned the circuit breaker back to on.

    iii. That the correct isolation and testing procedures were not adhered to by the deceased.

80. Mr Hudson opined in his report that had the deceased carried out the correct isolating and testing procedures as per the relevant standards this would more than likely have prevented his death.

81. In his evidence, Mr Davidson stated that as best he could recall events, that when he spoke with the Aboriginal male ie Mr Tapau, he "inferred" from what the male had stated to him that the electrician had been the one to turn off the switch to hot water service 2. As noted earlier in these findings, Mr Tapau gave evidence before this Inquest for the very first time that he had in fact turned off the very last switch on the power board being what he thought was the hot water service switch. This appears consistent with how the switches appeared to Mr Davidson when he inspected the power board. Given that there is no prior knowledge of one another, or friendship between Mr Davidson and Mr Tapau, it is unlikely that these persons have concocted a story with one another for the purpose of this Inquest.

82. Mr Davidson stated that he was in fact initially highly suspicious of the Aboriginal male in the house and that he thought he must have done something wrong. However Mr Davidson stated that that manner in which the male spoke to him, and what he said led him to form the opinion that his man was telling him the truth.

83. There was no formal investigation conducted by NT Work Safe. The inquest was advised that Work Safe had relied upon the report of Mr Hudson from the Electrical Safety Unit and had not conducted their own report.

Causation

84. The report of Mr Hudson identifies 3 possible contributors to the death of Mr Davis: -

i. The identification of the circuit breakers at the switchboard;

ii. That an unknown person or person's turned the circuit breaker on whilst the deceased was working;

iii. The correct isolation and testing procedures were not adhered to by the deceased

The identification of the circuit breakers

85. Based upon the evidence before this Inquest it is clear that the circuit breakers at Lot 246 were not adequately identified. There were in fact 2 hot water services to this property. Mr Hudson stated that in his many years experience this is not what he would expect with a residence at an Aboriginal community. It is also not the experience of this Court, after many years here in the Northern Territory.

86. Mr Tapau stated in his evidence that he believed he had turned off the switch for the hot water service, but that he has since discovered that there were in fact 2 switches. If Mr Tapau did in fact turn off the switch as he

now says that he did, then this would have made no difference, as it was not the service that the deceased was in fact working on.

87. Mr Hudson gave evidence that the responsibility for ensuring that the circuit breakers are correctly identified rests with the original person who installs the circuit breaker, and/or the owner/manager of the property. Here the owner/manager was Yugul Mangi Council.

88. Mr Hudson did however state that if an electrician saw that a circuit breaker was not correctly identified then there existed an obligation to list that as a defect. It is not known to this Inquest if the deceased would have done that after working on the hot water service and no criticism can be made of the deceased in relation to the correct identification of the circuit breakers in these circumstances.

That unknown person/s turned the circuit breaker on

89. All occupants of the house state that at no time did the deceased enter into the house. There is no direct evidence before this Inquest that he entered the house. The only evidence that he may have entered the house is based on the prior experience of Mr Warke who knew the deceased well and had worked with him on many occasions that the deceased was extremely safety conscious and a very good and reliable electrician. It was clearly the opinion of Mr Warke based on those years of knowing the deceased that it was almost incredible that the deceased would not have entered into the house and turned off the power.

90. Mr Tapau stated that the deceased initially told him that he was "just going to have a look" at the service. Mr Hudson stated that it was possible that work on the system could have commenced without isolating the power.

91. Mr Tapau states in his own evidence that whilst the deceased was at the premises he turned off the circuit breaker for what he thought was the hot water service. At the very least Mr Tapau went to the power board at some time after the deceased arrived at the house. Ms Thompson-Watson stated that she did not see the deceased arrive. Although she stated she saw no one go to the power box, including Mr Tapau, it is possible that Mr Tapau went to that power box whilst Ms Thompson-Watson and the children were in the bedroom.

That the correct isolation and testing procedures were not adhered to by the deceased

92. It has been suggested that there are 5 possible alternative scenarios as to what occurred after the deceased arrived at Lot 246:

i. That the deceased arrived, entered the house and turned off the circuit breaker to the hot water service that he was about to work upon. Thereafter he then taped up the switchboard with duct tape and commenced work. That during that time, someone has removed that duct tape and turned on the hot water service;

ii. That the deceased arrived and saw Mr Tapau at the front veranda as stated by Mr Tapau. That because of their friendship the deceased trusted Mr Tapau and told Mr Tapau what he was about to do and asked Mr Tapau to turn off the hot water service. That unfortunately Mr Tapau thereafter did not do as he was asked, or became distracted and forgot to turn off the power. The deceased then also failed to conduct a test with his multimeter to ensure that the power was turned off;

iii. That the deceased arrived, entered the house, turned off the circuit breaker, taped off the switchboard and commenced work. That during that time he needed to go and get some parts and he

therefore isolated the conductor he was working upon with a single screw connector and left Lot 246 to obtain that part. That whilst he was away a person inside the house turned on the power to the hot water service. That when the deceased returned he did not carry out a further test to make sure the power was still off, and was electrocuted as soon as he exposed the now "live" wire;

iv. That the deceased arrived, entered the house, turned off the circuit breaker, taped off the switchboard and commenced work. That during that time one of the occupants in the house wished to use the stove. That the stove could only be used by flicking the switch at the power box. That one of the occupants removed the tape in order to access the switch for the stove. That the switch for the stove was directly beside the switch for the hot water service and whilst turning on the switch for the stove, that person has also switched on the hot water service being worked on by the deceased;

v. That the deceased arrived but he did not turn off the switch for the hot water service or had not isolated the switchboard in any way.

93. In relation to each of those alternative scenarios the following is to be noted:

Scenario (i)

94. There was no evidence before this Inquest that the deceased did in fact place tape upon the switchboard to identify that it should not be used. It is clear to this Inquest that the deceased is unlikely to have used danger tags as Mr Warke gave evidence that they discussed that they were of no use in Aboriginal communities because of the language issue.

95. Although this Inquest accepts that this was the deceased's usual practice there is simply no evidence that this occurred on this occasion. Although it is noted that months later Mr Warke worked at Lot 246 and had tape come away that he had placed on the power box, it was the finding of Senior Constable Watkinson who also knew the deceased and is a police officer of many years standing that there was no evidence that such tape had been intentionally removed by any person inside Lot 246 at that time, nor that it had been unravelled.

96. It was Senior Constable Watkinson's opinion that on that subsequent occasion the tape had in fact come away from the switch board of itself, most likely due to the shape of the lid and the considerable dust on the box itself, and particularly given that the tape was found nearby in the same shape as it was when it had been wrapped around the lid. Further none of the occupants of Lot 246 as at the death of the deceased were occupants on the occasion referred to by Mr Warke, nor had the switch been turned on after the tape had been removed.

97. It is also to be remembered that there is no evidence before this Inquest, and the direct evidence is in fact to the contrary, that the deceased entered into the residence at any time.

98. If the deceased did in fact enter the residence, and taped the switchboard, it appears that he has not complied with the isolation procedures in accordance with the various standards required of him. Had the deceased done more than simply tape the switch board, in the manner that Mr Warke described having seen the deceased do a number of times, ie by carrying out one of the methods described by Mr Hudson of either removing the cable or connector, or locking out the box or circuit breaker, that this is likely to have significantly reduced the possibility of his death. Further, in order for this to occur, the deceased is likely to have also failed to carry out a further test

with his multimeter, because if he did, he would have discovered that the power was on.

Scenario (ii)

99. There is no direct evidence before this Inquest that the deceased made any such request of Mr Tapau. Although it appears that the 2 were friends, based on the evidence given by Mr Tapau, it appears extremely unlikely, particularly in light of the evidence of how particular the deceased was about safety, that the deceased would have placed such an obligation upon another person, even a friend.

100. Even if this Inquest were to accept that the deceased may have done this, it appears unlikely that Mr Tapau would forget such a request, or would not have realised the importance of such a request given his basic understanding of the dangers of electricity and his reaction when he saw the deceased on the roof with the wire still in the pliers.

101. Again, if this Inquest were to find that the deceased made such a request of Mr Tapau, this would very much have been a direct breach by the deceased of his safety obligations and given the evidence as to the safety consciousness of the deceased, the Inquest finds that this scenario is highly unlikely.

Scenario (iii)

102. Again it is noted that there is no evidence before this Inquest, and the direct evidence is in fact to the contrary, that the deceased entered into the residence at any time. It is also to be noted that at no time did either Mr Tapau or Ms Thompson-Watson notice the deceased leave. Mr Warke states that if the deceased did leave, he is likely to have walked to the shed to obtain parts. The occupants of course may not have noticed this.

103. If it were the case that the deceased did indeed carry out all those steps, removed the old hot water element, isolated the wires he was working on and then left the residence, it would have been incumbent upon the deceased to have then re-executed those tests upon his return.

104. It is to be noted here that there is evidence that if the hot water element found in the back yard was the one in the hot water service, that it would have tripped out the hot water service switch and there would be no power to the service. Upon removal of that old element it would have required someone to turn on that switch to return power to the hot water service. Even if the deceased had not turned off the switch itself, it is possible that due to the state of the old element the switch for that hot water service would have been tripped into the off position already.

105. It appears to this Inquest to be highly unlikely that someone inside the residence would have turned on the switch for the hot water service 1, being worked on by the deceased, but then also have turned off hot water service 2. Even if the turning off of hot water service 2 had been done later by someone inside the house, after realising the death of the deceased, it appears highly unlikely that that same person would not then also turn off the switch for hot water service 1.

106. If it were the case that someone inside the house did in fact either see the deceased leave, or did not consider the deceased at all, and simply turned on the switch to the hot water service in the deceased's absence, it is clear from the evidence of Mr Warke that had the deceased carried out another test upon his return to Lot 246 he would have discovered that the power had been turned back on to the service. If the deceased did not in fact conduct that test upon his return then it appears that this would have significantly increased the risk of the death of the deceased.

Scenario (iv)

107. Again it is noted that there is no evidence before this Inquest, and the direct evidence is in fact to the contrary, that the deceased entered into the residence at any time. However it appears that it is very much his usual practice to have in fact entered the residence and checked the switchboard. If it were the case that the deceased did indeed carry out all those steps, it is then necessary to consider whether the stove was required to be used by flicking the switch on and off at the switch board.

108. It is to be noted that the evidence in relation to the flicking on and off of the stove came from Mr Warke after being recalled. He did not give such evidence initially. It is also to be noted that such evidence was not set out in the statutory declaration that he provided to police and which is attached to the coronial file being exhibit 2.

109. Mr Warke stated that he could not recall who told him that the stove could only be operated by flicking the switch on and off at the board. There is no direct evidence of this before the inquest. It is vague and highly speculative evidence at best.

110. Mr Tapau also stated that he had been cooking rice on the stove and he did not need to flick the switch on at the power board to use the stove. Mr Hudson also gave evidence that although there were 2 elements that had fallen done in the stove, and there was no door, it appeared that the stove was operating and he had not been given any information to indicate it could only be operated by switching it on at the switch board.

111. It appears highly unlikely in those circumstances that what Mr Warke says he heard from someone about the stove at that house was in fact correct. It further appears highly unlikely that this scenario is in fact what occurred at Lot 246 on this fateful day.

Scenario (v)

112. In order for this scenario to have occurred it would have required the deceased to have acted in a manner completely contrary to the manner in which he was known to ordinarily operate and completely contrary to his usual practices.

113. It appears highly unlikely to this Inquest that for no apparent reason the deceased would have suddenly failed to use all his usual safety precautions and done nothing whatsoever in relation to this house when he attended.

Findings

114. There is no doubt that Mr Davis was a well known, well liked and hard working man. That is clearly evident by the presence of his family at this Inquest, and the evidence of those who knew him at this Inquest, in particular Mr Warke and Mr Tapau. It is also clear that Mr Davis was usually a very careful and safety conscious worker. As Mr Warke stated it is difficult to believe that the deceased did not carry out his usual safety procedures.

115. Although there is no direct evidence before this Inquest that Mr Davis in fact entered the house at Lot 246, it is clear to this Inquest that his history indicates he was usually an extremely safety conscious worker and would have gone in to the house at some time. It appears unlikely that he did that when he first arrived and that it is likely that he did in fact access the roof and "check it out" as he told Mr Tapau he was going to do.

116. It appears more likely than not, due to his safety history, that at some stage after that Mr Davis did in fact enter the house. It may be that Mr Davis was not seen by any of the occupants as they were in the bedroom at the time, and/or Mr Tapau had his back to the door whilst he was cooking. It would not be unreasonable, due to their friendship, that Mr Davis would have felt

comfortable enough to come and go inside the house whilst he was working there, without seeking permission to enter each time.

117. It appears more likely than not that Mr Davis would have ensured that the switch was in the off position. However it appears that on this occasion Mr Davis did not place any tape upon the switchboard, or did not adequately isolate the switchboard from other persons by any of the other methods discussed in the evidence of Mr Hudson. Even if Mr Davis did place some tape on the switchboard to isolate it, it is the finding of this Inquest that simply placing duct tape or any tape is not sufficient compliance with the Australian Safety standards for the isolation of equipment.

118. It also appears more likely than not that thereafter the deceased has not further tested the area with his multimeter , as had he done so it is more likely than not that he would have discovered that the power was on. This has therefore likely increased the risk of his death.

119. Unfortunately this inquest is simply unable to determine how the power came to be turned back on. This leads this inquest to the only option available but to make an open finding as to how the power came to be on.

120. It is noted that the family of the deceased have indicated that they consider the standards to be open to a number of interpretations and "vague" in their terms. It has been recommended to this Inquest that there should be amendments made to the standards, particularly in relation to where electrical work is being conducted in areas where there are persons of non-English speaking background.

121. It is the recommendation of this Inquest that the Minister amend the standards to provide that where there is required to be isolation, and there are persons present who are of non-English speaking background, then there is required to be a mandatory lock off of the switch board requiring an actual padlock to prevent access to the switch board itself.

122. There was evidence from Mr Hudson that there are a number of different devices for the lock out of circuit breakers themselves. Because of the various types of circuit breakers this Inquest finds that in order to provide one easily understood safety standard it should be a mandatory lock out of the switchboard, rather than simply the circuit breaker alone.

123. I find that there is insufficient evidence of a crime that may have been committed in connection with the death and accordingly no report is required under s.35(3) of the *Coroners Act*.

Dated this 2nd day of May 2008.

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GREG CAVANAGH
TERRITORY CORONER