

THERMOSTATIC MIXING VALVES — LEAD CONTAMINATION TESTING

Motion

DR M.D. NAHAN (Riverton — Leader of the Opposition) [4.01 pm]: I move —

That this house calls on the McGowan government, in the interests of public health and providing surety to the community, to immediately identify and begin testing across Western Australia all thermostatic mixing valves installed at public facilities, similar to those installed at Perth Children's Hospital, and to conduct thorough visual and chemical testing of the QEII ring main to rule it out as a source of lead.

This is the first time I have been able to go through my experience with the Perth Children's Hospital in detail in Parliament. I will be the lead speaker for the opposition, and it will be a cathartic experience for me. If members read all the material that is publicly available, as I have, they will see that this is to a large extent a unique experience. Indeed, when the Building Commissioner made an assessment of the lead levels at Perth Children's Hospital in his April 2017 report, he said that there were no other benchmarks to test against for the primary reason that lead levels have almost never been tested in similar buildings. I have talked with a large number of people, including the Building Commissioner, and they cannot find anywhere in the world a similar occurrence in which a brand-new building of this quality has been contaminated by lead like this. The question is: how did it happen? We are struggling to find the answer. I want to preface this with a couple of points so I can cover the whole issue.

The government's impetuosity to get in and resolve the issue was driven by comments made during the election campaign. It underestimated the complexity of this issue and the need to stand back and assess all the issues. The government came in too quickly on a range of fronts. It took practical completion too early, and I will go through that. It has ruled out the ring main as the source of contamination, at least on advice it received from the Chief Health Officer, but it received advice from others, such as the Building Commission, that there was adequate evidence that the ring main run by the Department of Health to the Queen Elizabeth II site still had high levels of lead in it. The government jumped in too quickly and the Minister for Health has been more emphatic than the Chief Health Officer that the thermostatic mixing valve and the assembly around it is the cause of the problem and that replacing these will solve the problem. The Chief Health Officer's assessment does not agree with that and actually points somewhere else.

The Chief Health Officer has a statutory role. It is true that he is a regulator of a whole range of things, including water quality going into hospitals, but he is not the sole source of information; in fact, his skill base is regulated. For the details on this facility, he relies on a range of experts—just like everyone else. The argument that we should leave it up to him and what he says is not the be-all and end-all. First, a vast array of work has been done on this problem, with 19 different leading Australian, Western Australian and world assessors having tested water and been involved in this, so there is a huge amount of data.

Let me go over the history of Perth Children's Hospital. This hospital has been plagued with a range of problems, but today I want to focus on the lead levels. The history goes back to January 2015 when the plumbing of the hospital was basically finished and the contractors decided to run water in the hospital. The water came from the ring main around the QEII site, which is the responsibility and property of the Department of Health, more specifically the QEII fund.

Mr R.H. Cook: It was actually January 2016.

Dr M.D. NAHAN: No.

Mr R.H. Cook: That is what the report says.

Dr M.D. NAHAN: No, the minister should read the Building Commissioner's report. If the Jacobs report says 2015, it is wrong. I can give the minister the citation later. Christopher Contracting, the plumbing contractor for John Holland, was brought in, and it filled up the hospital pipes and tested the water in 2014. But it did not test for lead; it tested for microbial matter and other factors that are regularly tested at the QEII site. "Why would we?" they thought. They flooded the hospital pipes. They did not chlorinate the water at the time, although there are conflicting results on that, which I will get back to. I have read that they did not chlorinate the water, but they brought it in at that time. They filled up and flushed the hospital pipes, but they left the water there for nearly 15 months.

Mr W.J. Johnston: Why did they do that?

Dr M.D. NAHAN: I presume that was because of other delays in the hospital construction. That is a really crucial piece of evidence. In 2016, when it got closer to opening the hospital, it flushed the pipes again and started putting chlorine in there as part of the standard process. In May 2016, it decided to test for lead. I remember this because I received advice. The water was tested because it is a children's hospital and lead is particularly dangerous to young children, so people in the strategic projects division said, "Let's test for lead." Lead levels had not been

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tested at any other new hospital, including Fiona Stanley Hospital and Midland Hospital, but they tested for lead and shock, horror, there were elevated levels of lead in the water throughout the hospital, including in the tanks in the basement. The water comes in from the ring main through a fitting and into the tanks at the bottom of the hospital. There was substantial lead in those tanks in the basement, which were used for different purposes, including pressurising. Some of the lead was visible—I saw it; I looked at video pictures of it. The question is: how did it get there? The advice I received from the strategic projects division—again, the Department of Health was involved in this process but was more or less at arm's length from it—was that it is common in building sites that debris from the site contaminates the water and that it is flushed out, so we flushed and flushed, and tested. The levels started going down, but they were variable and did not diminish anywhere near as much as we had hoped. After months and months, it was not being properly eliminated.

The Building Commissioner was on site at the time on another issue—I think on asbestos panelling. He is not directed by the minister, but obviously the people at strategic projects asked him to look at this, or he chose to, which was a good idea. They brought in Jacobs and a raft of experts to find out what was going on and how it could be solved. As I said, there were 19 sets of experts, including from the Water Corporation, ChemCentre, Curtin University and a whole raft of other people internationally. It must have kept a lot of water experts in good money for a long time. That is the story. I was not informed of this, but before September, particularly in July, we started putting probes up the stainless steel risers and we saw rust and irregularities; debris, detritus and gunk was caked onto the stainless steel risers, which are the big stainless steel tubes that bring the water up to the various floors. Samples were taken and we found out that there were various types of material but the debris was highly laden with lead. When water rushed past it, it leached out lead into the water system. Lead was in the risers and, at least initially, substantial water, lead, debris and detritus was in the tanks right after the ring main. That is very important because, clearly, at that stage the lead was not coming from the dezincification of the fittings because there were not any brass fittings; they were all stainless steel or plastic. We were getting lead into the tanks and the risers of a substantial and very significant level that was not coming from dezincification at that time. It might have been elsewhere at that time in the hospital. We worked on it and even thought about sticking ice in there to abrade it—all sorts of theories. I am a politician and an ex-economist, not a corrosion engineer or a hydraulic engineer. I relied on the advice of the same group of people who are advising the minister now. That was the issue.

We had a whole range of other theories and people working on this. The Building Commissioner and Jacobs were on site looking at it and gave a report in December. In December or so we decided that there was so much crud that had lead in it in the risers that we had to replace whole sections of them. They had to be replaced. It was obviously a long-term source and was not because of dezincification so we put filters on all the laterals. The risers went up to a floor and we put filters on all the laterals. The hope was that the detritus that was the cause of the lead had not got past the risers and into the laterals; that was the theory that was put to us. Clearly, after we put the filters in, the lead levels started deteriorating on most of the floors very quickly, but it got nowhere near where we hoped it would get—that is, complete elimination of the lead in the laterals. We were stuck. We kept the filters there for a while and they were obviously catching lead. I was told that the filters were changed very regularly. They were taken out and tested and lead was found in those filters on most floors, but not all. One building was lead free.

The experts went on to test other things. We lost government and the Building Commission report came out, as did the Jacobs report and whatnot. In December and January, we had other problems with the hospital as well as the lead, particularly with Schneider Electric, which was putting in high-end electronics; there were a few other issues. Strategic projects suggested that we might have to take practical completion before all these problems were solved, just to get it done but we decided not to. There are certain clear conditions in the contract that define the appropriateness for practical completion. One of them is that all major defects had to be eliminated; there could only be minor defects. Lead in the system was not a minor defect nor, at that time, was the Schneider electronics stuff. I do not know at what stage Schneider Electric is, but I know that lead is not a minor defect. The new government came in and were committed to taking charge and solving the issue. I hope it solves the issues and it needed to take charge, but it did not need to take practical completion. The minister has made the analogy repeatedly that if you have a house built and move in and there are faults, you go back to the builder. That is true, but in this case, if we use that analogy, if you buy a house, you get it tested before you move in. In particular, you test the water to see whether there is gunk in it or whatever. You turn on the stove to test it. In fact, you can hire people to do this testing for you. If essential pieces are not fixed, you do not take final possession of the house. That is what the government has done in this case. It has taken possession of a building on the basis that lead is a minor defect. Quite obviously, it is not. The Chief Health Officer is a very experienced person. I did not have too many personal discussions with him because he reports to the Minister for Health and not to the Treasurer in this case. His regulatory powers come into play only when practical completion is taken and the Department of Health takes over the hospital; that is true, but he can provide advice before then.

Strategic projects and the other team—there was a large team of people there—were requiring John Holland to do all sorts of things during my watch. It was not just lead; it had a lot of things to do. At one time it had 10 000 defects to fix up. To my knowledge, John Holland was doing it. Sometimes it did not do it very quickly, but it was doing

it. I never had any direct contact with John Holland on that issue. I went through strategic projects in all cases. I often met with John Holland with strategic projects there nonetheless. The government did not need to take practical completion to do what it is doing now. The Building Commissioner did a very thorough report before practical completion was taken and Jacobs prepared its first and second reports. The government could have done that. I am sure that the government could have asked John Holland to replace those TMVs or give it information on those. My understanding is that in these types of contracts, if the contractor is asked to do something, it says, “Yes, sir!” because it gets paid to take it out and gets money on top of the replacement cost. I have been told that, generally, contractors are more than willing to do these sorts of things. The government did not need to take practical completion. The real issue is that there will be disputes about the source of the lead—no doubt. If, as the Minister for Health and the Chief Health Officer imply, the fault lies with the major contractor and the government wants the major contractor to do the work and be held for the liabilities, it does not want to take possession before those liabilities are fixed and then go into arbitration or before the court. I think it was a major error and that we will see that down the track. I hope not but let us go.

On the ring main, the Building Commission report was the eureka moment for me because I sat there trying to ask where the stuff that was in the risers and the holding tanks in the basement came from. It was there.

Mr W.J. Johnston: Under the road.

Dr M.D. NAHAN: No.

The Building Commissioner clearly laid out the scenario that the ring main had been owned by the Department of Health through its various agencies—the QT side—for a substantial period. Someone said 50 years but it might have been less; I do not know.

We have found out that that ring main had not been repaired for the last five years. It had not been addressed, fixed up or cleaned. It did not have scouring valves attached to it and it was made up of many different things. The Building Commissioner found a dead leg. It was an offshoot from the rectangular ring main but the water was contiguous and connected to the ring main. The Building Commissioner found and described that there were a number of events that potentially would have led to the flushing of material in the ring main as well as the flushing of material in the risers for the fire hydrants, which are numerous around the place. He found high levels of concentrated lead—something like 200 times the allowable Australian level for drinking water—in the ring main and in the risers for the fire hydrant. He also said that, potentially, this material that is in both the risers for the fire hydrants and the ring main was elsewhere in the bottom of the ring main. The Building Commissioner said that. He is the expert on these types of things and we have outside advice to support him.

If I were in government, I would have done a number of things. I would have stuck the tube video cameras—they are really microscopic—that were used in the risers in the hospital in the ring main. Even if we stop any additional parts of lead by putting a filter in the ring main in the Perth Children’s Hospital, it is a source of lead for elsewhere in the Queen Elizabeth II Medical Centre site, including Sir Charles Gairdner Hospital and Ronald McDonald House and the medical school and a bunch of research facilities. If we know or have evidence that there is lead in a rectangular source of the plumbing, we test it. I have not heard, and the government has not said, that it has done that. It needs to be a priority. I tell members that the claim will be, at least in part, if not in full, that the initial source of lead to the hospital came from the ring main. I think there is a strong argument for that, as set out by the Building Commissioner.

The Jacobs report and other reports show that there have been 19 instances since January this year of spikes and elevated levels of lead coming into the hospital. There have been 19 samples showing elevated levels of lead coming from the ring main into the hospital. That strongly confirms the Building Commissioner’s finding that there are elevated lead levels in the ring main, which is run by the Department of Health and supplies the Perth Children’s Hospital and a range of health facilities in that area. The government has to do something about it. It is just commonsense. There is evidence that this has not been maintained and scoured and cleaned for a long time. I read in the Building Commissioner’s report that the dead leg was removed at the behest of the Building Commissioner, but I am also told that it was not blocked off and part of it remains. That is a rumour.

The Chief Health Officer quite categorically rules out the dead leg as a source of the lead. I think it is correct that it is not currently the source of the lead, because, as the reports also state, a filter is still in place—it was put in place some time ago before the water initially came into the hospital—that filters the water from the ring main to the hospital. I understand that the department either has or is taking down the filters elsewhere. Yes, it is not the source now, but that filter was not there when the water first came in and lay there for 15 months. Therefore, the ring main and the dead leg are likely, I argue, to have been the initial source or part of the problem. I am not arguing that they are the sole problem. Quite clearly, there is another problem here, which is dezincification. It is incumbent on the government to test that ring main. I argue that the Department of Water or, more importantly, Water Corp should take back that ring main from the Department of Health and upgrade it, have the Water Corp

come in, examine it, test it, replace it and give a report—and own it. Clearly, the Department of Health has been negligent in maintaining that ring main and the dead leg. The Building Commissioner report shows a picture of the dead leg. It had water and high levels of toxic material in a water system that supplied the hospital. Clearly, that is wrong. Maintaining pipes and water systems is not the core business of the hospital. It has other businesses. Why not take it away and give it to Water Corp to take over and replace all the bloody pipes—they are very old anyway—and get on with it.

The Chief Health Officer has made an error in dismissing the findings of the Building Commissioner and the Jacobs report, which clearly show that there is a huge question about lead in the ring main that was there not only in 2015 and before or September 2016 when the dead leg was removed; it is there now. There have been 19 instances since January of spikes of elevated lead levels potentially going into the Perth Children's Hospital since January. That is a problem. Dismissing the dead leg and ring main out of hand is a serious error. I hope that they correct it. It is also an issue in the sense that if we take off that filter, it could potentially—if my theory is right—put more lead back into the hospital and, potentially, we would have to start all over again. Secondly, there are all sorts of other, as I said, important assets that are sucking water out of that thing, and if there is a disturbance in the water system and we get back-flushing, we will have trouble in Charlie's and a range of other places, including Ronald McDonald House, where there is a large number of young children.

I turn to the solution of the thermostatic mixing valves. The TMVs are an off-the-shelf commodity. We know this because we read the Commissioner of Health's report and he has a picture of the mixing valves and the source, and pictures of the unit. We used the web and found two plumbing suppliers that sell these on a regular basis and have sold hundreds of them around Western Australia and Australia. Originally, at least, the kit is from Sweden. This Swedish firm sells them all around the world. I assume that there are variations to them; I do not know. Some pictures look as though they have stainless steel; some have brass in them. They are off the shelf and we bung them in. The Chief Health Officer states in the report that there are 1 200 of them. The Chief Health Officer is very coy on these things, so he is not as emphatic as the minister. He has gone through and assessed through testing for lead. He is, basically, a public health specialist and a statistician, so he is good at these things. He identifies a high concentration of lead in some of the outlets from or in the vicinity of the TMVs. Fair enough. Just take his data at first step. He concludes that there is an isolated system. Then he has taken six of them out and tested them and some have dezincification. Those are the facts. That is a sample size of half a per cent of the total number of TMVs in the system. He says that we have to test these TMVs more widely. It has to be done. The Chief Health Officer also said that there was clear evidence that—again, the sample size was very small—in part of one line on one floor, which he could access without destroying too much, it was found that valves through the laterals also had dezincification in them. They had to check not only the TMVs, but also all the brass fittings in the laterals in the plumbing system. Do members know how many brass fittings are on the laterals? There are 10 000. Significant elevated levels of lead were found to be coming from the few brass fittings that were tested.

The brass fittings are far upstream from the TMVs. The TMVs basically mix the hot and cold water before the potable water reaches the floors—the risers on the floor and ceilings and whatnot. Way upstream significant levels of lead were found. It cannot be said, as the minister has said, that the single culprit is the TMVs, because that is not what the Chief Health Officer found. To replace the TMVs—from the evidence provided, even though the sample size is paltry—would be far too premature, although the Chief Health Officer has regularly identified the TMVs as the source of the problem.

During question time today it was clear that the minister was not aware of quite a few of these issues. It appears that he does not know that they are in fact off-the-shelf fittings and are from Sweden, not from China. There may be Chinese parts in them—I have no idea whether there are—but the fittings were purchased from a global firm, in Sweden, and thousands of them are provided around Australia and are probably fitted in every major building in Perth. If the TMVs are the source of lead and are found to be faulty—as any person would do if they found a fault in a Volvo; they would go to Volvo—the seller of the TMV should tell the company that sold the item that a fault has been found in their product. They should ask, “What do you reckon? Can you respond?” The regulator should also be informed—I think in this case it is the Australian Competition and Consumer Commission—that a fitting that is used throughout Australia has a problem with it and that it has been found to be faulty. Someone needs to be notified so that the problem can be fixed. Recently, certain car air bags were found to have a fault and a major car manufacturer, Toyota, wrote to me and said that there may be a fault in the air bags in my car, so I was asked to bring my car in so they could be replaced. There is a process to go through.

The minister should know, first of all, that the TMVs are off the shelf and that there are 1 200 of them in the hospital. He should have notified the builder and then the regulator that there was a fault in them so they could start addressing the problem. He did not do that. He did not even know that they were off-the-shelf items from Sweden. I emphasise that they are from Sweden because I was watching the minister speaking the other day online and everyone was saying that the fittings were cheap Chinese junk. That was a concern in the community when I was minister and those derogatory statements were made. My understanding is that the Building Commissioner

and Jacobs have looked through all the fittings in the hospital and have said that they meet Australian standards as per the requirements. The health officer's report also mentioned that some fittings in the TMVs were not watermarked and that therefore, potentially, they could be substandard or off-spec, if you wish, but the lack of a watermark does not mean only that—it just has to be validated. That is another reason to go to John Holland, which ordered them, or the provider to ask them about that. It is not a difficult or time-consuming path to follow. That could have been done before coming out with a speculative report.

The problem is that replacing 1 200 TMVs, even if no dezincification has been found, will not solve the problem. As the Chief Health Officer found, there are 10 000 brass fittings in the hospital that are also dezincified, so replacing the TMVs would not solve the problem, as was implied by the minister last Friday. Do not blame the problem on that totally.

What is the cause of the problem? Clearly there is dezincification. I am no expert, but three theories have been put forward and, to date, we do not know which one is the right one. First, the report is saying that excessive chlorination could have caused dezincification. Do we know that is the case? We absolutely do not. The Building Commissioner and the Chief Health Officer state quite emphatically that the documentation on chlorination is surprisingly inadequate, that there have been five episodes of chlorination, and that the documentation of the chlorination is not adequate to ascertain whether the chlorination is excessive or the cause of the problem. In other words, the Chief Health Officer does not know. He is calling it a hypothesis and he going to pursue it.

I might add that two of the chlorination episodes took place in April and, the latest, in June this year. Two of the five known episodes of chlorination happened after the Building Commissioner's report was released and stated that that might be the cause of the problem. If excessive chlorination was an issue, why was the water re-chlorinated? There might have been a good reason for that. I would not know; I am not an expert in chlorination. However, there is a theory out there that chlorination is the problem. The Chief Health Officer has said that it is a hypothesis, and the lack of data means that he cannot say yes or no, so he advises us to be careful about pinning all our hopes on solving the chlorination problem because it may not be the problem.

There is also another issue about the TMVs. There were two editions of the Jacobs report, one from December and one from April. The Jacobs report looked at the TMVs and found that they not only meet Australian standards, but also are not the source of lead—they are not dezincifying. That raises two points: firstly, there is a diversity of views between the experts on this matter; and, secondly, concerns that the TMVs are the overwhelming source of lead may not be correct because the six that the Chief Health Officer looked at may be a unique sample. The TMVs are very accessible—they are just in boxes and a panel simply needs to be pulled off so that they can be examined. We would assume that a consultant, who is paid probably by the hour—very highly too—would look at more than six items. Probably in the initial testing only six were taken out because they have to be ripped up—they are destroyed. But if an inspection was done to check whether they meet the Australian Standard or they have any dezincification, more than six need to be tested. Jacobs Engineering, a major contracting firm, tested the TMVs and found them to comply with the Australian Standard and found dezincification was not the cause of the problem. We have conflicting evidence.

This is a complex issue without adequate data to resolve it and for it to be defended. If we make an action, and say, "Eureka!" or believe we have had a Chamberlain moment and found the solution "in our time", and it does not turn out to be right —

The ACTING SPEAKER: Leader of the Opposition, you are supposed to address the Chair. I have been okay about it, but Hansard cannot hear you.

Dr M.D. NAHAN: Good. I will look at you, Madam Acting Speaker. I know you are interested in this stuff. It is scintillating! TMVs is a very interesting topic!

THE ACTING SPEAKER: Yes!

Dr M.D. NAHAN: I have given this a lot of thought. In fact, the other night I was struggling, because I started to read the Chief Health Officer's report at 11.30 pm and I finished it at 1.00 am, and, once we read it, we cannot sleep for a while. This is a reality. We all want this thing to be resolved. It is unlikely, on the evidence provided, that TMVs are the sole solution. I can guarantee what is happening. I have talked to a couple of plumbing providers. There are a couple of major plumbing contractors in my electorate. By the way, I have been inundated with advice, just like, I am sure, the Minister for Health.

Mr R.H. Cook: There are a lot of experts on this subject.

Dr M.D. NAHAN: I got another bit of advice last night. They said that they have got the solution. Usually, we listen to them and we feel like saying, "You're a bit off on some of your basic facts", but we learn not to say that and just listen and nod.

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I was talking about TMVs. This is sending shockwaves around the plumbing industry, because a large number of these devices are being used. They are high end and very expensive. They are supplied by a large firm in Sweden. The Swedes take their lives seriously. This will bring into question one of the major plumbing providers in the world. The Chief Health Officer has found that there are faults with these devices. This will lead to all sorts of issues. The Building Commissioner will probably have to deal with this issue.

Another issue is chlorination. If the problem is not chlorination—we cannot say yes or no, but we cannot rule it out—what is the cause of the dezincification? I go back to my position. I am absolutely sure that part of the problem early on was the material that came from the main drain. That is why I said honestly that the Building Commissioner's report was a eureka moment for me, because I had spent hours looking at this and had not been able to find the cause of the problem. There were all sorts of theories. One theory was that building debris had somehow been able to get into a fully enclosed and encapsulated water system. I believe that happens on parking lots and whatnot. However, this is different. This is not a drainage system; this is a plumbing system. However, it could happen. We thought about sabotage and putting cameras around the building. We did not want to do that; I do not think anybody would. However, once the Building Commission had tested the water in the ring main, I was almost convinced that I knew what the problem was. The Building Commission did some isotopic testing of the material in the ring main and found a high intensity of lead. The science is not there to track the particulate lead in the plumbing, so I cannot say that for sure. However, I can guarantee that at least initially, and when I was there, a large source of the problem was the ring main. That is probably not the case now, because I understand that the risers that needed to be replaced, because the stuff was caked on, have been replaced. Secondly, filters have been put on the intakes to capture a lot of the lead. Those filters have been there for the last five, six or seven months. The water has now been flushing for almost a year, and hopefully most of that stuff has gone out of the system. My point is fix the ring main and do not let the contaminated water come back in.

I want to raise another issue. I am not accusing anybody of anything. However, if the ring main was originally the source of the lead, it is the Department of Health's responsibility, because it owns the hospital. Therefore, it might have an interest in arguing that the ring main was not at that time, and I do not think it is now, the source of the lead contamination. That is why I argued that we should get the Water Corporation to take back that ring main. The Water Corporation tested the water that is coming into the ring main, and it has been clear all the time. As soon as the lead issue came into it, the Water Corporation sent huge teams of people to the site to check all the water that it sends through that system. The Water Corporation tests for lead in a range of places, particularly in rural areas, where there is a real problem with lead in artesian water.

Another problem is that to the best of our knowledge, the TMVs and other plumbing devices that have been used in this children's hospital have also been used at Fiona Stanley Hospital and Midland Hospital, and for the expansions of Joondalup Hospital and Albany Hospital, which were done by John Holland. There is no base case to assess whether this plumbing material is unique, because no-one has been testing for lead. The reality is that unless we find something in this material that is unique to Perth Children's Hospital, we will need to examine all those other hospitals. It is not the minister's fault. It is just the case.

There is some literature around the world to say that the lead threshold is 11 parts per billion. It is very low. It is world standard and Australian standard. We are not going to debate that. The Chief Health Officer says in his report that there is a level of "groupthink"—I do not know who he is talking about—that the blame for the problem lies not on the hospital but on the testing. He says that the threshold was so low that the "groupthink" is that the testing was all wrong. As the minister at the time, I never heard that from anybody. We relied on the ChemCentre. It was a very sophisticated test and it took two or three days to get the results. I never heard anybody criticise the testing mechanisms of the ChemCentre or anybody else. We accepted the data as it was, as we should.

The Canadians have looked at lead contamination in buildings. This is raised in some information that we received under freedom of information. It was recommended to Strategic Projects and Asset Sales that it undertake phosphate treatment. That has not worked as much as was hoped, but there is evidence that it is doing some good, so it will continue to do that. The fact is that the builder of the hospital let the water in the hospital remain stationary, with gunk in it, for 15 months without getting it flushed. That is another potential cause of dezincification. Indeed, my hunch—it is only a hunch—is that the major causes of the dezincification are, first, the lead in the ring main, and, second, that the water was allowed to remain stationary for 15 months without any chlorination. To my knowledge, after our government took possession of Fiona Stanley Hospital, it took us a long time to finish it off, because of the electronics and other things, before it could take patients. My understanding is that during that time, the water was being used all the time and did not remain stationary. The advice from the Canadians is that stationary water can cause dezincification of high-quality Australian-standard plumbing parts. I add that the TMVs are advertised by the provider as dezincification-resistant fittings—brass—made for purpose, with high-quality Australian-standard material. That means that other large facilities that put through a lot of water may suffer the same consequences. That applies particularly to schools, because the same fittings are used in

schools. As we know, not many kids are around during school breaks, and the water in the plumbing system remains stationary for long periods.

If this is where the data is leading—it is not an ideological thing—this is something we need to pursue. Let me reiterate where I have been on this. This is a highly technical set of issues with a lot of reports that point to numerous solutions. All of them have to be pursued and none ruled out. There is unlikely to be a single solution. There will be no eureka moment here: “I found the solution in the TMVs.” The data provided by the Chief Health Officer argues against that. The Chief Health Officer said not only did the TMVs have to be looked at, but also there needed to be higher sample rates. Those 10 000 units throughout the system needed to be looked at. They cannot be ruled out. In fact, he says that he and his team will now look at that. If it is the TMVs, the government has a serious problem not only at the children’s hospital, but everywhere else, and the government has the duty to inform many other people, probably thousands, using these things throughout Australia that a fault has been found in them; at least some of them. A recall or a notification to the regulator needs to be made.

The ring main was initially part of the problem and it has to be checked and ripped out. In my view, the whole thing has to be replaced. The Department of Health needs to vest it back to the Water Corporation. It has large cash procedures that will not affect the government’s budget, because it would be done off budget. Independent experts should go in there to find out what is wrong with it, fix it up, and own it and keep it in good shape. That Queen Elizabeth II site is not just for the children’s hospital; eventually another hospital will be built there. It will be a larger intensive facility. The issue of the ring main needs to be owned by somebody who is an expert in the water area. I also think the government needs to address all the concerns raised by various reports and not rely solely on the Chief Health Officer. Yes, he will decide whether the water quality is okay and the hospital can be opened; that is his major task. But if he has a diagnosis that allows that to happen but does not solve the problem for the long term, it might come back again. If it comes back again, the cost to the state will be huge, and I particularly go back to the issue of the ring main.

The Building Commissioner is the expert on builders and his statement is quite emphatic. He said that we cannot say how common this is and we cannot assess this position, because there is no other data of a comparable nature available here or around the world. If that is the case, and we have this problem, maybe the government has to look wider to other facilities around Western Australia, at least in the QEII site. I will give an example. If the theory that the Building Commissioner put is true, that the material from the dead leg and risers for the fire hydrants have been sucked into the hospital—in my view there is evidence that it clearly has been—and disturbed the flow of the pipes, why would that same material not go into the ring mains of buildings other than the children’s hospital? Why would it not just swing around and go into QEII, the university, the Sarich research facility or Ronald McDonald House? Do members know what? They have not been tested thoroughly, to my knowledge. That needs to be done, particularly on that site. If the problem is found, the government might say it has been solved, temporarily at least, by massive flushing, and by replacing the filters in the hospital, the TMVs and the valves, but unless the source is found, the problem might come back again. More importantly, it might go to other premises such as the new schools, which have a large volume of water around them.

The government needs to expand things. But to go back to the beginning, in my view the government has made a serious error in order to achieve a pre-election commitment to take charge and ownership of the problem. The government should have looked for the facts and it should have known that it did not have enough information during the election campaign to do that. My colleagues have pointed out that there was some disagreement between the health department and the Treasurer about whether that should be done or not. That mistake will be borne out and we will hold the government to account for it. It was suggested to the former government, but it declined. The government also really needs to fix the ring main. If the government focuses totally on the TMVs, it will clearly miss something and, if it is the TMVs, it will have to tell the providers of this material. One of the lessons I have learnt from all of the material that was provided to us by the experts is that we are mere politicians. The buck stops with the minister. I am not excusing my role as Treasurer in overseeing the construction of the building. This is not the only issue that plagued that building. The government has to make sure that it listens to a whole range of advice. This is a highly uncertain area involving the facility and if the government excludes other advice and only takes the advice of the Chief Health Officer, ruling out other sources of the problem, it is likely to not only rule out the cause of the problem, but also it is unlikely to fix it. That is my major concern in reading this report. I might add that this report can be described as very preliminary. When the Chief Health Officer comes out with his findings, what if the heading is “what we think it means”—not “what we find” but “what we think it means”? He is a scientist—very few things are definitive in his life; it is all statistical. This is a hypothesis; it is not a solution. From here I recommend that the government does a whole range of other testing for these things. The government should particularly inspect and test a greater number of brass fittings with floor distribution levels, with and without TMVs—in other words, start testing those things. This is not a definitive report. It is a set of hypotheses—what we think we mean. It is not a guide or indication in any way, shape or form by which the minister should or can say that the solution has been found. It may turn out to be the solution, if the government is lucky, but it could

not be said that this is a lucky project. Things have not gone the way of the government. It was a serious error for the minister to say on social media last Friday that the solution had been found. We will hold the government to account for that. The data in the report does not state that at all.

As I say, this has been a cathartic process for me. It is one of the most difficult projects I have ever had to deal with, mainly because I was the minister. This is not something I have a great deal of expertise in. We were flooded with advice. This project was unique in that we could not find any similar situations in the world. I might add that the irony of this was that when I asked the minister whether any other building was tested for lead, the answer was no, never. I asked why it was tested for lead. The government said that it thought it was a good idea as it is a children's hospital. Good on the government, but we are into new territory now and I think it will find that because of the increasing concerns about lead and the steady reduction in the threshold of lead in Australia and worldwide and the commonality of fittings, it will get increasing problems with lead that we found in this hospital in buildings all around the world and all around Perth and we will re-visit this policy over and over again. I encourage the government to address the issues I raise as an interested party in this because if we do not get this right, this children's hospital will not be open for years.

MR S.K. L'ESTRANGE (Churchlands) [5.00 pm]: This is a very serious matter because we are dealing with a future hospital, which is about the health and wellbeing of the children of the state of Western Australia. It is an outstanding project. It is a hallmark project of the former Liberal–National government that has been thwarted by a very, very serious issue—that is, lead in the water. It is a plumbing issue that no doubt incredibly frustrated former Premier Colin Barnett, former Treasurer Mike Nahan and former health ministers John Day and Kim Hames. It is a very serious issue. This is one of those flagship projects about which we really want to say to the people of Western Australia, “That mining boom did not go to waste. Here is a gift to the people of Western Australia off the back of the resources boom, and it is the Perth Children's Hospital.”

That dream of a wonderful opening of a brand-new facility has been damaged reputationally by this lead issue. I want to step members through where the opposition was on this while the government was dealing with the issue last year. Then I want to move quickly to the handover after 11 March and take members through some of the reports and findings that have come out and how the new government has been dealing with this very serious issue. I first draw the attention of members to a quote from Minister Cook when he was in opposition dated Wednesday, 14 September 2016. He said —

We now know that that minister was very wrong. However, this minister, only months away from the opening of the hospital, cannot even provide us with a month or an estimate of when this hospital will open. What does \$1.2 billion buy us? It does not buy us a deadline. It buys us —

He goes on to refer to all sorts of issues. He continues —

Lord knows where that lead is coming from. One would have thought that with the resources of government and the public interest in and focus on this issue, this government would have at least come forward with some answers about where this lead contamination is coming from. Why do we have contradictory stories from the Minister for Water and the Premier?

Those were the conditions that the opposition put to the government of the day in and around this lead issue. It seems to me that the situation has not changed in the first six months of this government. There is still conjecture in and around where this lead is coming from. With regard to transparency, the Premier made a very serious pledge. ABC news reported —

“The first thing the Government should do, release every email, every report, every briefing note. Release them all,” he said.

This is what McGowan said before the election. He was reported as saying —

“And I'll tell you what if they don't, if we're elected, I am going to release them all no matter how uncomfortable it is.”

That was a pledge of transparency from the now Premier when he was opposition leader. Linked to that is this call for transparency from the now Minister for Health, as reported in *The West Australian*, which stated —

Mr Cook said his Government was committed to transparency about what went wrong with the hospital project.

This is an article from *The West Australian* dated 5 April 2017 by Gary Adshead. It goes on to state —

But yesterday it refused —

Being the government —

Extract from Hansard

[ASSEMBLY — Wednesday, 16 August 2017]

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Dr Mike Nahan; Mr Sean L'Estrange; Mr Zak Kirkup; Mrs Liza Harvey; Mr Ben Wyatt; Mr Roger Cook

to release any of John Holland's handover documents.

We know the problems. We know that we need to get to the bottom of the problem. We tried to do that while we were in government. The Labor Party is now in government. It is trying to do that. It pledged to the people of Western Australia that it would be open and transparent in that process and here it is, at the first hurdle, refusing to release any of John Holland's handover documents to outline its position on this so that the people of Western Australia can do some analysis on what the problem might be.

I also have an article quoting the Treasurer, Minister Wyatt. The article by ABC news dated Tuesday, 31 December states —

The WA Government is adamant it will not accept the Perth Children's Hospital back from the head contractor until ongoing lead contamination is resolved for good.

...

Health Department director-general David Russell-Weisz said authorities would not accept the hospital back until the issue was clearly resolved.

He was reported as saying —

"They need to make good on practical completion and one of those is having water in the Perth Children's Hospital that is compliant.

That was the situation at the time. A media statement dated 3 May 2017 stated —

Treasurer Ben Wyatt said a full media briefing and release of supporting documentation was in line with the State Government's commitment to ensuring transparency around information about construction issues ...

We have this new government saying that it is going to be transparent and advice to say that it needs to make sure that everything is careful and above board, but let us now look at where we are at with the government taking control in March and the reports that have come out. The first one we saw was the ChemCentre report. That was brought about on behalf of Treasury to investigate the lead issue. It was delivered in April 2017. The ChemCentre report was the first one. Then we had a Building Commission report for the Perth Children's Hospital. The audit report was completed in April 2017. Jacobs Australia Pty Ltd was commissioned to do a report for strategic projects dated April 2017. Three reports on this lead issue came in in April 2017. The government has a pledge for transparency, it has a goal to fix the lead problem that it said it would work very hard to do and to take control of this project, and it has these reports.

Dr A.D. Buti: Have you been speaking to John Holland?

Mr S.K. L'ESTRANGE: No; all I have been doing is reading the reports.

Dr A.D. Buti: Have you?

Mr S.K. L'ESTRANGE: No; all I have been doing is reading the reports.

The SPEAKER: Members! Member for Armadale, I call you to order for the first time.

Mr S.K. L'ESTRANGE: I will quickly address that interjection. No, I have not met with anybody from John Holland and I have not been briefed by anybody in opposition with any notion of any briefing by John Holland. I have read all the reports and I have read news articles on this issue and I have formed my own conclusions.

Mrs L.M. Harvey: If you want to impugn his character, read standing order 92.

The SPEAKER: Deputy Leader of the Opposition, we know what the standing orders are. Just let your own member talk without interrupting.

Mr S.K. L'ESTRANGE: I move on now with what Labor has done about practical completion of the hospital. I refer to an article that appeared in *The West Australian* on Wednesday, 5 April 2017 titled "Patient safety must guide children's hospital saga". It states —

On Monday, Treasurer Ben Wyatt denied a completion date had been agreed.

"The State Government has not yet been provided with a firm practical completion date," Mr Wyatt said.

The article goes on to quote Minister Cook. It states —

Yesterday, Mr Cook said the source of the lead "remains in dispute" and that there was still "a long way to go" before reaching agreement "on the practical completion date".

That was published on 5 April. The public would be thinking, “Okay, there is a fair bit to go. Obviously, reports are coming in and we do not know quite where things are at.”

Then we found that on 21 April, not long later, another article appeared in *The West Australian*. It was titled “State takes the keys to children’s hospital”. It reads, in part —

... the decision to accept “practical completion” by builder John Holland was made so the Government could take control of the remaining problems.

...

But Health Minister Roger Cook said there was still no opening date for the troubled hospital, “We are in the hands of the Chief Health Officer,” he said.

The Government said having possession of the building also meant the commissioning could begin.

On 21 April, we had practical completion—taking the keys. My concern with that is that this lead issue has not been resolved. Practical completion has been taken without the lead issue having been resolved. That concern was also expressed by reporter Gary Adshead in an article dated 23 May 2017 titled “Wrong week to deal with risk”. He wrote —

... there’s a briefing note to Health Minister Roger Cook dated March 31.

It explains the “key risks” of agreeing with builder John Holland to a “practical completion” of the hospital ...

This briefing was from the Department of Health itself to the minister. The article continues, quoting the Department of Health —

“The Department of Health holds significant concern that the State’s representative will grant practical completion despite the ongoing sampling, testing and remediation and assurance requirements associated with the potable water supply, a number of which are not yet fully developed, reviewed or endorsed by the State,” the briefing report read.

Prepared by the Perth Children’s Hospital Taskforce, the report to the minister was signed off by Health director-general David Russell-Weisz.

Clearly, the Department of Health did not want the government to take practical completion. That is quite clear in this briefing, yet we know that the government took practical completion and handed over to the Chief Health Officer, who is obviously acting on behalf of the government. There is certainly tension here. People out in the community have identified a concern about why the government would take practical completion when the advice of the Department of Health tells it not to do so. Why would the government take that risk?

Let us move on a bit. What do we think Labor thinks is the cause of this lead issue? The government has now taken practical completion, and has pledged to the people of Western Australia that it will fix the problem. There is tension within the government, with the department telling it not to take practical completion, and the government has ignored that and has taken it. The government took practical completion in April, and that was at the same time that three reports were completed—one by the ChemCentre for Treasury, one by the Building Commission, and the Jacobs report for Strategic Projects. The government then received a report from the Chief Health Officer. This report was issued in July, but it followed a directive from the Minister for Health to the Chief Health Officer to conduct an inquiry. It sets the terms of reference for that inquiry. I draw the attention of members to the tensions that have been reported to exist within the Department of Health. This is in the public domain. We now have a minister of the Crown tasking a Chief Health Officer to provide the minister with a report. The fascinating thing about this report is that it assumed away a number of the findings of the three previous reports submitted in April—the same month in which the government decided to take practical completion. I am not a complete conspiracy theorist. I am just stating facts. These are dates and facts. Members can draw their own conclusions.

Mr W.J. Johnston: What is your conclusion?

Mr S.K. L’ESTRANGE: I am not going to give my conclusion yet, minister. Let me finish my speech.

What is really significant here is the paragraph of Gary Adshead’s article that reads —

“It would be highly problematic for Government if the water supply in a paediatric hospital was closed by the regulator due to elevated lead levels after the acceptance of practical completion, even if the facility was only partially occupied,” the document said.

That is from the Department of Health to the government. That is a very serious concern. The government took practical completion with this advice telling it not to do so. It then commissioned its own Chief Health Officer to conduct an inquiry, and then that inquiry made some findings that went against the findings of the previous three reports. In fact, it is concerning that the Chief Health Officer's report made assumptions based on a review of the data and previous technical reports that the lead was not coming from, firstly, the incoming water source—either the main Water Corporation supply, the Queen Elizabeth II Medical Centre ring main, other associated pipes within the QEII site, or the north and south feed into the Perth Children's Hospital linked to the QEII ring main—secondly, debris as a primary source, or, thirdly, microbial-induced corrosion. They were assumed away in this report. We know that the report found that the thermostatic valve assembly boxes were the only source of the problem. That in itself was inconsistent with previous reports. That is an interesting situation.

I refer to the media release by the Minister for Health dated 11 August 2017 titled "Chief Health Officer reports on water at Perth Children's Hospital" that states —

The State Government today accepted the findings in the report from Western Australia's Chief Health Officer (CHO) on Perth's Children's Hospital Potable Water.

...

The CHO has concluded that the source of the lead in the water is the dezincification of brass fittings.

...

The CHO's key recommendation is to remove and replace the TMV Assembly Boxes.

It is very black and white. The minister's media release is very clear on how he sees the way forward. In the context of that media release, we have the CHO working for the minister. He was directed by the minister to do this report. We have the department disagreeing with the government taking practical completion. Most significant, and most concerning for me, is that the government ignored a key recommendation from the Building Commission itself.

Mr R.H. Cook: What is that?

Mr S.K. L'ESTRANGE: I will read it for the minister. It is paragraph 9.2.1 on page 68 of the Building Commission's report titled "Perth Children's Hospital", under the key recommendation, "Recommendation 2 — lead in plumbing networks". It reads —

The Building Commission recommends that the State appoints an independent organisation to review the existing test results and carry out whatever additional tests are needed to determine the proportions of lead that came from the identified sources of lead at the PCH.

That Building Commission report was released in April.

[Member's time extended.]

Mr S.K. L'ESTRANGE: The government has ignored a key recommendation in and around lead, and has instead appointed the Chief Health Officer to conduct an inquiry under direction from the minister. He has assumed away all the other report concerns and focused on these TMV boxes and joints and valves.

I now look at another aspect of the concerns in the Building Commission report, page 45 of which reads —

The potential sources of lead contamination at PCH are:

- fittings, such as hydrants and valves, within the QEII ring main leaching lead directly into the water;
- residues within the QEII ring main transported into the PCH and trapped in the construction debris within the PCH pipework;
- residues generated within PCH from dezincified brass fittings and trapped in the construction debris within the PCH pipework; and
- dezincified brass fittings within PCH leaching lead directly into the water.

That report contains quite a bit of information, so why assume it all away and release a media statement to the public saying, "We found the problem; here it is, and this is how we are going to fix it." Why did the minister assume away all this other stuff that had not been independently tested? The people of Western Australia deserve more than what we are currently seeing on this.

The final pieces of evidence I came across in researching this speech today is from the Jacobs report in April. Item 12 on page 19 of that report is fascinating as it lists the different components that were tested. Item 12 is "Thermostatic mixing valves". It states that metallurgical testing for the installed thermostatic mixing valves has been undertaken by ChemCentre. The possible outcomes in the "Results" column are "Clear/Fail/Potential Issue",

and item 12 is listed as “Clear”. One report says that the TMVs are not the cause of the lead contamination, and the finding of the Chief Health Officer—who is under direction from the minister to conduct an inquiry, so he is not independent—is that, in his view, that result is clearly wrong and the Department of Health is taking practical completion because of the lead issue.

This is a mess. The minister can pontificate and say that the lead issue was a mess when we were in government. We know it was a mess, but the former Liberal–National government refused to take practical completion. It would not take practical completion until this lead issue was resolved. Members can go back through all the media releases and reports, and they can refute what I have said if I am wrong, but the former government refused to take practical completion. The McGowan government chose to draw a line in the sand in April. It stood in front of the people of Western Australia and said that it was in charge and was taking over this mess. It said, “That mob before couldn’t do it, but we’re doing it.” I am sure that when the government made that announcement, the people of Western Australia were motivated and thought it was fantastic, but I wonder whether they knew what I have explained to the house today. I wonder whether they knew that the Department of Health advised the government not to take practical completion because the issue was too big. I wonder whether they know about the three reports that came out at the same time the government decided to take practical completion and that findings in those reports were signed away by the Chief Health Officer, who was charged by the minister to write a report that may or may not be proved to have been written to suit the minister’s practical political imperative of the day to show he has taken control, when in actual fact he has not.

I am concerned that evidence will show that the minister might not be in control. That is evidenced by the minister’s own words. For example, if, as the minister’s media release suggests, the problem is just the TMVs and that fixing that will solve the problem, why have we not got a project plan showing the date that all of those valves will be replaced, the cost of replacing those valves and then the opening date of the hospital? Why is the minister saying that he wishes he could give an opening date, but he cannot, and when questioned on 6PR, we heard words to the effect that it will probably be open in the first or second quarter of 2018. Why would the minister be guessing? If it is the TMVs and the valves, all he needs to do is get a group of engineers and project managers together over a weekend to write a project plan, and they will show the minister how long it will take to replace all this stuff and what it will cost. That is the advice the minister took from his Chief Health Officer, which he agreed with and which he told the people of Western Australia. We all saw the minister’s media conference with the big picture behind him showing a dissected valve. The minister convinced the people of Western Australia that that was the problem. The minister said the problem had been identified, and he had narrowed down a plan to fix it. If it is that simple, why does the minister not give us a date when the Perth Children’s Hospital will open? More importantly, why did the minister ignore the Building Commissioner’s recommendation for an independent audit of all the tests done to date and to conduct further tests to help work out exactly what the lead problem is?

At the moment I fear for the people of Western Australia because the minister is allowing this to be his political football. If the minister is not careful, this will become his “hospital-gate”. If the minister is not careful and he keeps trying to get reports written to suit himself and does not fix the problem, and he covers up the problem by not being open and transparent, which he said he would be, I fear the minister will not be honest with the people of Western Australia and they will not have certainty over the safety of the Perth Children’s Hospital. They deserve better than that. They deserve to know what the water quality is at that hospital and to have it independently tested and verified so they can be sure the minister is doing everything he can in their best interests and not in the interests of the minister’s political objectives. That is critically important.

I think the minister took practical completion too early. When I read those quotes from briefing notes from the Department of Health advising the minister to not take practical completion, I thought the minister was brave to decide, based on a political imperative, to go forward and take practical completion against the advice of those senior public servants who are paid big salaries to give that advice.

Dr M.D. Nahan: And who will be responsible for the hospital.

Mr S.K. L’ESTRANGE: Yes, and who ultimately will be responsible for the hospital. The minister took practical completion too early. He drew a line in the sand when he took practical completion. He can keep blaming the former government for the lead pollution if he wants. The people of Western Australia know it is a plumbing issue. The people of Western Australia threw the former government out on 11 March. Maybe they threw us out because we could not solve the problem, but it is now this government’s problem. The minister can pontificate and say it was our problem, but it is now his problem. He took the keys in April against the advice of the department. He commissioned the Chief Health Officer to do a report, in which he assumed away the findings in three other reports. The minister has gone to the people of Western Australia and said the problem was the TMVs. If that is so, the minister should deliver to the people of Western Australia a project plan and all the briefings, emails, notes and documents on this topic that have been submitted to the minister by John Holland and others. He should put all this on a website so that everybody who has a serious concern about this issue can review all those documents and do their own analysis, and possibly even give the minister sound advice. That is what members opposite went to

the election saying they would do. We are not seeing that. I implore the government to stand up for the people of Western Australia and make sure that it does not continue to use the Perth Children's Hospital as a political football; rather, it takes the view that this is a serious matter that should be resolved carefully so that the people of Western Australia have confidence that their Perth Children's Hospital will be what they want it to be: a gift from the government—the current government or the past government—which invested an enormous amount of money into building a state-of-the-art, brand-new children's hospital for the people of Western Australia. That is what the people of Western Australia want. That was the intent for this hospital, regardless of which side of politics we sit on. This government has the baton. It is its job to deliver that gift, not ours. I ask that the minister is careful and makes sure this lead issue is dealt with properly, and that he is open and transparent in how he deals with it.

MR Z.R.F. KIRKUP (Dawesville) [5.29 pm]: I would like to start my speech this evening by saying that the Perth Children's Hospital is a fantastic piece of infrastructure. It is a great gift from the former government and I do not think that we should lose sight of that.

Several members interjected.

The SPEAKER: Minister!

Mr Z.R.F. KIRKUP: Similar to the demonisation and denigration that happened when the Labor Party was in opposition, we are hearing it now from the member for Mount Lawley and the wannabe senator who just left the chamber.

The SPEAKER: Member, you will call the member by his correct name.

Mr Z.R.F. KIRKUP: My apologies, Mr Speaker.

Dr A.D. Buti: You want to be a senator?

Mr Z.R.F. KIRKUP: No, the wannabe senator who left the chamber. He wanted to be; he just did not get preselected for that. That is, the member for Cannington.

I digress. It is a very complicated project that cost, I think, \$1.2 billion. It is universally recognised by the people who constructed it, designed it, the architects and the engineers —

Several members interjected.

The SPEAKER: Members!

Mr Z.R.F. KIRKUP: It is one of the most technically complex pieces of infrastructure ever undertaken by a government in Australia. It covers 120 000 square metres, has eight floors and two basements, 12 operating theatres and amazing integrated research facilities that are world class. It is something that we should all be really proud of. Michelle and I do not yet have children but if an event ever happens in which we have to take our children to a hospital, I will be very proud that we will be able to take them, hopefully one day, into Perth Children's Hospital. It has 298 beds. No doubt, every single person in this place wants the lead matter resolved as quickly as possible; we all want it solved. I find it fascinating, as my leader has already covered off on, that there are still so many significant issues outstanding and such a cloud hanging over this project after so long. It is a real concern and we stand united with the government in wanting to get this resolved as quickly as possible. The site had its complexities with the asbestos sheets from China, subcontractors possibly not getting paid and—there was a crescendo toward the end of the project—now lead at the hospital.

Most importantly, with the change of government, the current and first Minister for Health of this new government made the decision to take practical completion of the site. By definition, practical completion means that the legal status of the project changes and that the contractor has handed the facility over to the commissioning agent—in this case the state government or Department of Health—and that any existing issues that have been identified, which are called defects and classed as major or minor are defined, and remediation work is agreed upon before being handed over.

Having worked for a building company, I understand defects. It built one of the most expensive hotels in Western Australia for half a billion dollars. Defects happen and it is a significant problem because a lot of inputs go into any construction project. In a case like Perth Children's Hospital, with its complex engineering and world-class facilities, it is not surprising that there are major defects and minor defects. In all construction terminology that I am aware of, and having worked for one of Australia's largest builders, the term minor defect typically means that whatever the defect is, it does not prohibit the use of the building. Yet, with all the complexities, lead is still considered to be a minor defect. This government decided that it could deal with it and took on practical completion. I think that was a very irresponsible decision of this government and it was the wrong decision. I do not think we have been told in this house why the health minister decided to do that. He told us that there were two important elements of the minor defects. One is that the thermostatic mixing valves in the assembly boxes are to blame for the lead and that, categorically, the ring main is not. I am surprised at the categorical

language that has been used by this government that the thermostatic mixing valves and the assembly boxes are a source of lead. My understanding is that this is not cheap equipment from China. I understand that these valves, these pieces of plumbing equipment that mix the hot and cold water to a warm water outlet, have come from a high-quality producer in Sweden. It is a high-quality product that has been constructed to be compliant with Australian standards. They were constructed to meet the dezincification-resistant brass standards that would be expected in Australia. For what it is worth, my father, having been a plumber, always told me that Australia and the European Union have the lowest tolerance for lead in brass. Anywhere else in the world, higher quantities of lead in brass are accepted. In the Australian standard I think it is about four per cent or thereabouts.

When we consider these TMVs and assembly boxes, it is important that we understand that there are literally thousands of these being used right now across Australia. As the Leader of the Opposition said during question time, they are used in hospitals, aged-care facilities, schools and many other places. The state government is arguing that these products are faulty and are the cause of a minor defect for lead so we cannot have children using the Perth Children's Hospital facilities. Personally, I am not sure that the TMVs are the only source of the lead, but in the spirit in which I opened the speech, I am willing to back the government here and assume that the minister is correct and hope that is the case. Even if it is the case that the TMVs are the source of the lead, let us consider for a moment the significant public health ramifications that will have right across Western Australia. If these TMVs, that were possibly constructed to a non-European Union or Australian standard or possibly a different international standard that allows for higher lead content and they might be leaching lead into the water, thousands of them are in the hospital as they are and they replicate the thousands that have been imported into Australia. It stands to reason that potentially hundreds of these TMVs are being used right now across Western Australia in public and private facilities. I do not know how else it can be interpreted. It is clear that the minister is fully aware of this health risk. I think it is important and incumbent upon a government that puts the public interest at heart to identify the sites where the TMVs are, not just in this hospital, but possibly in use right across Western Australia. Imagine for a moment that students are going to school and drinking from water fountains or something like that where these possibly lead-leaching TMVs are being used. I think that would spread a contagion of concern right across the state and Australia. Parents would likely be outraged if the state knew of the concern that TMVs pose to Western Australians' health and decided not to take any further action and not to inquire for whatever reason.

Similarly, the minister has used categorical language in ruling out the ring main at the QEII site as an area from which lead may currently be leaching from. It seems contrary to the Building Commissioner's report, which identified lead in the dead leg and the fire hydrants and the like. That is, I assume once again, in the spirit in which I started tonight, that the minister is right and we back him again. I think it is incumbent upon the minister to test other sites at QEII, given that Ronald McDonald House and Sir Charles Gairdner Hospital are there. The government should test those sites and find out whether lead is there. I think it is important for us to do that. There is a very clear way; we all know how it is done because it has been used to identify the lead issue at the Perth Children's Hospital site. It is chemical testing and in some cases, as the Leader of the Opposition pointed out, cameras can easily be put through the plumbing equipment and the ring main so we can understand whether there is corrosion or lead leaking into the water supply across the site. I am concerned that the government took practical completion prematurely. I appreciate that the health minister has inherited what I expect the government would identify as a health system on which the previous Liberal-National government spent a significant amount of money for hospitals and health infrastructure. It has inherited a great health system from the Liberal Party with one problem site, which we all want to get resolved.

I am surprised that the language has been so categorical. I hope that the minister is right and that we get these thermostatic mixing valves replaced as quickly as we can, and that for some bizarre reason they were isolated to only the Perth Children's Hospital site. It is important that if the TMVs are the culprit, we do all that we can to make sure that we identify them and ensure that children are not exposed at schools, seniors are not exposed to lead issues in aged-care facilities and other people in other hospitals are not being exposed to a similar threat of lead contamination. Unfortunately, in this case lead contamination has been legally defined as a minor defect and has seen the government take practical completion of an outstanding, architecturally amazing hospital. I do not think that the Department of Health should have taken it over. From listening to the debate here this evening, the Department of Health at one point wanted to delay acceptance of practical completion.

Answers that were given by the minister representing the Treasurer yesterday in the upper house state that the Department of Health took over practical completion on the understanding that lead was considered a minor defect and that under the contract, a minor defect cannot unduly impact the operation of the hospital. In what universe is lead in a hospital, a children's hospital at that, considered to be a minor defect? In my previous background in hotel and house construction, BGC Construction built 4 000 homes a year and if there was one source of lead in any one of those homes, we would not be able to hand it over to a client. If lead showed up in any one of the hotel rooms, the brand would not allow us to open that hotel. By the very nature of Australia's rigorous standards for lead, we cannot use any water source that might risk lead contamination. That to me means it prohibits the use of the intended

outcome of that building. Lead is not a minor defect. How can the government claim that rectifying this minor defect will not impact the operation of the hospital? It is absolutely impacting the operation of the hospital.

I appreciate the Deputy Premier taking this issue so seriously. I appreciate him being here and listening to the opposition this evening. I hope that we get an opportunity to hear from him later. I think it is important that the Deputy Premier allays the concerns in the community at large. We need to ensure that TMVs are not being used in applications more widespread than this hospital. It is important to rule them out of being used in schools, other hospitals and aged-care facilities, and, importantly, the QEII ring main site.

For what it is worth, during the election campaign and certainly in the lead-up to it, we heard scuttlebutt around the traps that there were some concerns about the QEII site and that if the lead came from the ring main, it could be leaching to all those other facilities on that site. We knew it could be leaching to Ronald McDonald House, possibly, if that was the case. It is really important that we get this right and ensure that there are not any contamination issues there.

The Perth Children's Hospital is a great project. It is a fantastic initiative commissioned by the previous government. It is absolutely technically difficult and one of the most complex sites I think undertaken by a government. Certainly, it is one of the most complex hospitals undertaken by a government and it shows; it is a beautiful building. If I am here late at night and sit in this house, I go for a run past Kings Park to Subiaco and then tour Elizabeth Quay and see the swathes of thousands who are there and then run back to this place.

Mr D.A. Templeman: You said late at night.

Mr Z.R.F. KIRKUP: There are thousands there always.

Dr A.D. Buti: You must be there at a different time from me, because I do not see thousands there all the time.

Mr Z.R.F. KIRKUP: I certainly do.

Dr A.D. Buti: They come to see you, don't they?

Mr Z.R.F. KIRKUP: They hear that I am there, member for Armadale. When we go past the Perth Children's Hospital building, it is clear that it is an impressive piece of infrastructure and all Western Australians should be proud of it. It is very important that we do not talk down this hospital.

Ms S.E. Winton: You can't talk it up.

Mr Z.R.F. KIRKUP: The member for Wanneroo cannot talk it up. Parents out there in Western Australia need faith that if their children get sick, they can go to this hospital and be sure that there are no further health risks to their children. I think that there are clear issues. I disagree with the taking of practical completion with my commercial understanding that typically we would not take it over if there were lead contamination issues. As I said, it is important to rule out the ring main and do what we can to identify the prevalence of possibly risky TMVs that might be spread right throughout Western Australia. That is why the opposition in this motion asks the government to start that identification and testing process. It is why we want to encourage the government to conduct this thorough visual and chemical testing, specifically at the QEII Medical Centre and the ring main site and rule it out as a source of lead. Given these issues and all this time, and given that the previous member for Dawesville told me the Deputy Premier was an astute shadow health minister who was very aware of the issues in that portfolio, I am surprised that the government has rushed so soon to take practical completion. We know all these issues. I think there should be far more consideration for the possible prevalence of this lead issue right across Western Australia and not only at the Perth Children's Hospital.

MRS L.M. HARVEY (Scarborough — Deputy Leader of the Opposition) [5.46 pm]: I thought that the minister might be on his feet at this time. However, I am very pleased to stand and prosecute the opposition's argument on this very important issue. As members on this side of the house have already explained, our real concern with this issue is that we believe the minister has jumped the gun and taken practical completion of the hospital in an ill-advised manner ahead of when was appropriate. The details of the water contamination issue at Perth Children's Hospital have been well canvassed, but I would like to summarise our case.

The government has been very generous in releasing a range of documents to do with Perth Children's Hospital, including from as far back as the former government's term. Consistent throughout all these documents was the advice that the ministers, the Treasurer, and the Minister for Health, were receiving from the government agencies and from the task force put together to manage the Perth Children's Hospital and the issues that have been uncovered. Every single briefing note that has been released by the government shows that the departments were warning consistently and emphatically that until the lead issue in the water had been resolved, this issue was a critical issue that needed to be resolved before the government took over practical completion.

We have talked a lot about sources of contamination and I would like to go over those. Whenever we talk about potential sources of contamination, I have been quite mortified to be accused of somehow being in cahoots with the contractor. My belief is that the actual source of the lead contamination and the issue over who, which agency, department or contractor will be responsible for all the costs involved in trying to solve this lead issue, will likely

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be resolved—sadly, for the taxpayer—in a somewhat protracted legal dispute. That is because there are many differing opinions on the source of this contamination.

It is believed that some of that detritus from the dead leg has been sucked into the water system in the Perth Children's Hospital and indeed has been identified in numerous reports as a potential source of the lead contamination. When we look at the analysis of the dead leg water, we see that lead was not the only contaminant in the dead leg. It contained arsenic at 40 per cent above the safe drinking water limit, and cadmium at 240 per cent, chromium at 68 per cent, copper at 700 per cent, nickel at 685 per cent, lead at 2 820 per cent; zinc at 46 per cent, manganese at 4 620 per cent and iron at 53 000 per cent above the levels that are acceptable for drinking water. The reason these metals have been identified in this way is that those metals are neurotoxins. The effects of exposure to these metals, for children in particular, are irreversible for some of those toxicities. That is the nub of the problem. That is why the lead issue had to be resolved before the government took possession of the hospital.

The Minister for Health has stated that one of the reasons that practical completion needed to occur was to enable the Department of Health to get into the site and get on with the job of commissioning the hospital. That is actually not true. A briefing note that has been released by the government, dated 1 November 2016, states that although practical completion of Perth Children's Hospital has not been achieved, over 1 800 PMH staff have completed onsite training; ICT deployment is over 82 per cent complete; the initial clinical clean of operating theatres, wards 2A, 2B, 4A and 4B and the patient kitchen is complete; departments have commenced workflow testing of their internal processes to ensure they can be conducted safely in the new environment; a central sterilisation services department performance qualification has been achieved; and a conditional poisons licence has been granted.

These briefing notes that the government has so generously released from the former government's time show that throughout the entire process, there has been access to the site by Department of Health officials and others to help with the commissioning of the site, knowing that practical completion cannot be achieved until the defects have been identified and repaired by the contractor. The minister has been quite emphatic in that he has been the hero of the day and the source of the lead has been identified as being the TMVs. However, a number of the reports that the government has commissioned cast significant doubt over whether the TMVs are the only source of lead contamination in this hospital. That is why it is important to provide a summary of these reports. The report from the Building Commission identified four potential sources of lead contamination. The first is lead leaching from fittings in the QEII ring main, such as fire hydrants et cetera. The second is lead contained in residues in the QEII ring main. The third is lead leaching from fittings in the Perth Children's Hospital plumbing, such as brass fittings and taps. I expect the TMVs fall into that category. However, there is eight kilometres of pipe and 10 000 brass fittings in the Perth Children's Hospital. If these brass components have been subject through whatever processes to dezincification, logic would tell us that the other brass fittings have been subject to a similar process of dezincification. Therefore, being able to identify which of the brass fittings are the source of the contamination and should be removed and checked is problematic. It is a very bold move to pin that back to only the TMVs.

Dezincification can be caused in a number of ways. These reports go to those causes. That is why the Department of Health, and, indeed, Strategic Projects and Asset Sales within the Department of Treasury, advised the government not to rush to take practical completion of the hospital. The Department of Treasury was not certain, from all the reports from scientists who specialise in these areas, about the source of the lead contamination. Time and again, both the former government and the current government were warned against taking practical completion ahead of time. That is because the agencies believed that the contractor needed to determine the source of the lead contamination and rectify it so that it would not become the burden of the Department of Health to find a resolution to that problem. As the member for Dawesville put it so eloquently, if we were purchasing a house and we turned on the taps and contaminated water came out, or the toilet did not flush, we would not say to the builder, "No problem. I will sign this off. Here is the final payment for the house. You take the money and run, and I will try to chase you through the court to fix this problem." That is not what any sensible human being would do. We would hold the final sign-off of the contract in abeyance until the problem was fixed. We would then have a bit of money left over that we could use to take the builder to court to have the problem fixed. It is ridiculous to say that the contractor is still responsible. The taxpayers of this state will ultimately be the ones who will have to pay through the nose to pursue that contractor through the courts to pull back all this expenditure to fix a problem that might be the contractor's fault or might have come from somewhere else. It is obvious to everyone who has been listening to this debate that the source of the lead contamination is not clear. In that context, and with the benefit of hindsight, taking practical completion of the hospital and taking charge of it was probably somewhat of a foolish move on behalf of the minister. I do not hold only the minister responsible for this. I hold cabinet responsible for this. I have the briefings that the government has willingly provided. Those briefings were given as cabinet-in-confidence to the now government. The summary that was given to the entire cabinet states —

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- Levels of lead increase post filtration on every floor of Central and South Block with a general increase in levels with elevation from Levels 1 to 5.
- 8L flush sample results as supplied by John Holland indicate a constant unacceptable level of lead within the hospital distribution system.

This document was delivered to the entire cabinet. The entire cabinet was briefed on it and knew about this issue. The summary concludes —

- From our analysis, the most plausible cause is dezincification. Other possible causes cannot be totally discarded at this stage.

We know the lead levels are still there. We know there is some inconsistency in the lead levels at different times depending on the flushing of the system and other factors. We know cabinet was briefed on that. We know that every briefing note that the government has so generously released for the media and for members in this house advises against the government taking practical completion of the hospital. Curiously, members, not one briefing note has been released to us that advises the government to take practical completion because the lead contamination is a minor issue. To my way of thinking, a minor issue is something that can be resolved. If I have problem with my car, for example a flat tyre, it is a minor issue; I know I just need to change that tyre and I am on my way. We do not even know the source of this lead contamination. How can an issue be identified as minor when the government has apparently no plan to rectify it? The government cannot tell us how long it will take to rectify the issue. It cannot be certain of how to fix it because none of the experts advising the government, who were no doubt paid a lot of money for reports, can tell us how the issue can be resolved.

The other red herring that has been thrown in, and hurled at us in question time, is that after the various different flushes of the system, the super chlorination that has to follow in order to remove the bugs and contaminants from the water could have been a cause of the dezincification process. We had it thrown at us today that the super chlorination process that happened on our watch caused this problem. But then we find in the Chief Health Officer's report that after the current government had taken control there were other flushes of the system. Members would be interested to know that a fourth chlorination could have occurred between 16 and 22 March, and we know that a fifth chlorination occurred on 6 and 7 May. We know that the lead issue still has not been resolved. The lead concentrations in the water are fluctuating after each of these flushes and we do not know definitively the source of the lead contamination—whether it is the TMVs, the other brass fittings that sit within the system or some of the sludge sitting in the ring main. With the ebbs and flows of the water supply going through the system—I have personal experience of this from where I live—if sediment sits at the bottom of a pipe for a while with a low water flow over it and a faster water flow then comes across the back of it, the sediment gets stirred up and pushed and flushed through the pipes. Each time these flushes have been occurring, we do not know whether some of the sludge sitting in the ring main has been stirred up and pushed into the system. The ring main has not been ruled out by anyone except, apparently, I think, the minister, who says it is definitely the TMVs. The contractor is suspicious of the ring main. It is not clear in this documentation whether the ring main has had continuous testing from when the original issue with the dead leg was identified. There is no reference in these documents to whether the ring main has been tested subsequent to the early testing after the original issue was identified, yet there is still lead recurring in the water.

[Member's time extended.]

Mrs L.M. HARVEY: We have grave concerns. I feel sorry for the minister and the government. We knew this was a difficult issue. That did not stop the now government, when it was in opposition, from pillorying us and making light of our attempts to rectify this issue. I think those sitting on the government benches now understand that it is a difficult issue and we still do not have the answers to it. We still do not know where that lead is coming from. However, now the government has taken practical completion of the project, and the taxpayers are responsible for fixing it. It is now our problem to fix, and if we want to pursue damages against the contractor, if indeed it can be identified that the contractor is responsible in some way, shape or form for this contamination, there will have to be a court process. The taxpayers will have to pay for that, which is a real shame. The Perth Children's Hospital —

[Quorum formed.]

Mrs L.M. HARVEY: I am surprised more members are not in here to listen to such an important issue —

Several members interjected.

The DEPUTY SPEAKER: Members, you are in the house now. Please do not continue with backroom conversations! A member is on her feet. Thank you for coming in; please be seated. Member, go ahead.

Mrs L.M. HARVEY: I will go back to what I think is a very telling document. It is a letter from Hon Roger Cook, MLA, Deputy Premier; Minister for Health; Mental Health to the Treasurer. It is dated 10 April 2017. I quote —

POTABLE WATER SUPPLY AND ACCEPTANCE OF PRACTICAL COMPLETION FOR PERTH CHILDREN'S HOSPITAL

... there remain a number of ongoing construction activities requiring urgent resolution before PC —

That is practical completion —

may be achieved. In particular, the resolution of the potable water issue is the most significant construction issue to be addressed prior to PC. It also represents a critical risk that could become a public health issue for the facility, if elevated lead levels were to recur after the acceptance of PC.

As has been agreed, the Chair of the PCH Commissioning and Transition Taskforce ... and the Executive Director Strategic Projects and Asset Sales will provide us with briefings, before a recommendation on the acceptance of PC is made by the State's Representative.

...

It has been recommended by the Taskforce that the State's Representative details the decision making process with respect to potable water, and what will be taken into account to determine whether the water quality is satisfactory, and therefore, fit-for-purpose. I look forward to discussing this with you in further detail at our next briefing on PCH.

A short time later—I think it was 10 days—we suddenly heard the announcement that the lead is now a minor issue. A minor issue is something that can be resolved easily. It can be resolved in a time frame that can be announced to the community. It can be resolved with a direct action plan of some sort to state, “This is the lead issue. This is definitively where it came from. These particular fittings will be replaced. After they have been replaced, we will flush the system and there will be no lead.” I still think it is somewhat of a major issue because there are a large number of fittings to be replaced and it is quite a big body of work. However, if members on the government benches think that it can be fixed, it becomes a minor issue, notwithstanding that 10 days earlier, it was a critical risk that could become a health issue for the facility. Within 10 days, we have gone from it being a significant construction issue, a critical risk, a public health issue for the facility and a recommendation not to take acceptance of practical completion, to saying, “It is a minor issue; it is all fine; there is no problem; we are going to fix it; we know it is going to be fixed. We'll go after the contractor for anything that happens from this point in time. Whether or not we can put patients into the facility is irrelevant and whether or not the water is free from lead is irrelevant. We will take it on because we have to be able to do a better job than the engineers—the experts—who have provided us with these reports, and the Building Commission.” The Building Commission report stated —

Until the source, or sources, of excessive lead is determined it is premature to find whether a registered or licensed contractor has acted appropriately.

...

Water and metallurgical testing for lead undertaken by various parties to date allows potential sources to be identified but not the contribution, if any, of each source to the lead detected in the tests.

I would call the Building Commission somewhat expert as well. It identified the four potential sources of lead contamination that I spoke about previously.

I want to refer to the Jacobs report as well. This is a not insubstantial document that was released on 21 April 2017. It very thoroughly goes over all the potential sources of lead contamination. Indeed, this report looks at the Queen Elizabeth II water source and definitely identifies that as a potential issue. It details the sampling that has been taken of that source. I note that on 10 March the test undertaken by John Holland Group indicated levels above the acceptable level. ChemCentre testing on the corresponding days showed that the levels were below the levels tested. Testing of lead in the water occurred on the same day from two different sources and they came up with a different result. That does not really definitively define where the problem could be coming from. The Jacobs report identifies the detritus in the pipes as being a potential issue. Another report from Zedcon—a preliminary report—indicated that the iron debris and particulate lead within the system are “holding lead as suspended and it is slowly leaching it into the water stream”. It found that iron filaments were settling on the base of the pipework within the sludge debris.

Professor Brian Kinsella's investigation of the Rehau PEX brass fittings from the potable water system of the Perth Children's Hospital determined that the results are consistent that the fittings contain lead. The report stated —

All brass fittings are water marked and approved brass fittings will have lead content within the approved levels. Brass quality whilst compliant can still vary between like valves and fittings.

The result of the investigation was that it was a potential issue.

Professor Brian Kinsella also identified that brass isolation valves could be a potential source of the lead. The report continues —

Installed potable water meters throughout PCH are mainly brass and/or epoxy coated.

A sample had been removed and tested. Once again, it is a potential issue and a potential source of lead contamination. The interesting thing about this is that I understand some of the thermostatic mixing valves have been seriously corroded but have been identified as not being a source of lead contamination. Other TMVs that have suffered less severe corrosion have been identified as being a source of lead contamination. Even though the minister is saying that the TMVs are the source, we know for certain that one TMV definitely is not.

Dr M.D. Nahan: One of the six tested.

Mrs L.M. HARVEY: Indeed. I thank the Leader of the Opposition.

Water balancing valves are a potential source of lead contamination because, once again, they are made of brass— notwithstanding that they are supposed to be up to a standard to withstand dezincification, like the thermostatic mixing valves were. If they have not been produced to an acceptable standard, they can be a potential source of lead contamination. Far from being clear on the source of the contamination, on a whim and a prayer we are hoping that the TMVs are actually the source. The opposition hopes that the minister and the Treasurer were right in identifying lead contamination as being a minor defect, albeit not knowing where it came from, and taking practical completion. It would give me no pleasure to come back to this place, after the TMVs have been replaced, to find that we still have lead contamination. I really hope that the government and the Department of Health are now furiously flushing kilolitres and kilolitres of water through those pipes at the hospital, moving as quickly as they can to push as much of that sludge in the ring main through the system and out the other end. In the interim, while the TMVs are being replaced, the government may well have bought enough time to have pushed all that lead from the dezincification process through the system. A protective coating from oxidation might develop over those brass fittings. That occurs under the right conditions. The government might get lucky through this process. It might find that after it has replaced the TMVs, the excessive, continuous flushing of water through those pipes has fixed the lead problem. We hope, from this side of the house, that that is the case because we do not want to subject the community of Western Australia to a long and protracted legal dispute that will no doubt follow should the replacement of the TMVs not fix this lead problem. We do not want to find that we still have unacceptably high lead levels because we have not accurately identified the source of the lead contamination. We do not want to find lead levels that create a critical risk to the health of the children of this state, for whom this hospital has been built. That would be a terrible outcome and one that the government can count on the opposition to hold it to account for. Practical completion should not have occurred while there was lead contamination in the system. No participant at a backyard barbeque in Western Australia would say that lead contamination in the water supply of a children's hospital is a minor defect. While the source of lead contamination has not been identified accurately by the government, not one parent in this state believes that it is a minor defect. We maintain that taking practical completion, although heroic, was somewhat foolish.

MR B.S. WYATT (Victoria Park — Treasurer) [6.18 pm]: I rise to make some comments on the Leader of the Opposition's motion. The Minister for Health will make some more substantive comments, but I just want to make some comments about the decision by the government to grant practical completion, the contractual terminology around "minor defect", and the reasons we took that decision. I note the motion from the Leader of the Opposition states —

That this house calls on the McGowan government ... to immediately identify and begin testing across Western Australia all thermostatic mixing valves installed at public facilities, similar to those installed at Perth Children's Hospital, and to conduct thorough visual and chemical testing of the QEII ring main to rule it out as a source of lead.

We will not be doing that, and I will explain why that is the case. Some questions have been raised. Indeed, the Deputy Leader of the Opposition outlined one of the points of confusion that has been going on for a long time during the whole process. There have been many reports, and there has been testing ad nauseam by both John Holland and the state. Jacobs, the Chief Health Officer and the Building Commission have all been referred to, all providing a range of reports that, to be frank, have not assisted in streamlining clarity, shall we say. They have actually added to much of the confusion around this issue. Noting also that the Deputy Leader of the Opposition and other people spoke tonight and demanded flushing et cetera, which should be going on continually, the reality is that flushing could not be done without practical completion having been given.

I will start with this point. Regardless of the thermostatic mixing valves mentioned in the latest report by the Chief Health Officer, I have no doubt that there will be litigation as a result of the construction of this hospital because there have been so many delays and so many disputes around the causes of delays. I want to be fairly general in my comments, but there will be legal proceedings as a result. From the advice I have received, I am

confident of the state's position, but this will play out for a long time. As I said to the media the other day, I hope that in due course it will be resolved without the need for a long and expensive court case.

I want to emphasise at this point that “practical completion” is a contractual term, as is the term “minor defect”. Many members of the opposition critiqued the government by saying that we were claiming that lead in water is a minor issue, but that is not correct. I think everybody accepts that lead in water is not a minor issue, but it was certainly classified as a minor defect, as in the terms of the managing contractor's contract to allow for practical completion. That allowed the state to resolve a stand-off. There was a fundamental difference of opinion between the state and John Holland, the contractor, about the source of the lead. Prior to practical completion, John Holland had control of the facility—a construction site, as members may recall it being referred to by the Leader of the Opposition, and that is true, as defined. It is a construction site until it is gazetted as a hospital, and John Holland had control of it. There was a stand-off, with John Holland saying that it was of the view that it had met its contractual requirements, having completed a hospital that met its obligations under the contract. The state's view—this was the view of the Leader of the Opposition as well—was that because of all this testing highlighting unsatisfactory levels of lead, it was internal to the construction site; that is, it was not coming externally, from the QEII ring main. On 28 January this year, the Leader of the Opposition, while still the Treasurer, made that point. I refer to a story from *The Weekend West* of 28 January, which reads —

Dr Nahan also rejected the builder's belief the lead source could be the water supply in the “ring main” pipe

“I heard that and it surprised me,” Dr Nahan said.

“The lead is not coming into the hospital. Full stop. It's in the hospital. For some reason the water laid stagnant after the hospital was built. Construction waste of substantial magnitude got into the water system—don't know how, but it did.”

Dr M.D. Nahan: That is an accurate quote, but that was before I received the Building Commission report.

Mr B.S. WYATT: That is the exact point I wanted to make. The Leader of the Opposition is correct. The article continues —

WA's chief health officer released a statement yesterday saying water circulating in the QEII precinct ring main was safe to drink.

The water in the QEII ring main, in the state's view, was and still is safe to drink. The Leader of the Opposition is right. I think this is the point the Leader of the Opposition is making—that unless someone is an expert in building hospitals and testing for lead, they must rely on these various reports and information that comes their way. That was 28 January 2017. The Leader of the Opposition is of that view, as we were when we granted practical completion and as the Chief Health Officer was when he ticked off on the Queen Elizabeth II ring main. I want to emphasise again that the Department of Health conducted two detailed inspections of the QEII ring main—on 30 January 2017, just after the article I just quoted appeared, and on 7 April 2017. On both occasions the integrity and satisfactory condition of the ring main, associated connections and offtakes was confirmed. The Chief Health Officer reviewed a significant number of tests completed by the North Metropolitan Health Service for the QEII ring main and for buildings connected to the ring main from July 2016 onwards. He remains confident that the regular program of testing and maintenance is appropriate for identifying any issues proactively. Hence, the Chief Health Officer remains confident, as he has stated and I have quoted already, that the drinking water supplied by the QEII ring main is safe for consumption.

There was effectively a difference of opinion. The state said that it was from inside the hospital construction site and John Holland said, “No, it's not. As far as we're concerned, we've delivered you a hospital under the terms of our contract. We're not interested. We won't allow you to do anything to rectify the problems that the state thinks are causing the elevated lead.” Members will recall that it is the state's view—as it was when we granted practical completion—that it was the dezincification of the brass fittings. John Holland said, “We disagree, and we're not going to allow you to come in here and flush polyphosphate through the pipes to correct that problem.”

There we were. We had the option of continuing to bicker over it and perhaps to go through the courts, I guess using some form of injunctive process, to try to force John Holland to flush polyphosphate through the pipes. John Holland was never going to do that because that would effectively have been an acknowledgement that it had not met its contractual obligations, so of course it was not going to do that. The advice that the Minister for Health and I sought was, “How do we break this stalemate whilst protecting the state's interests?” We granted practical completion—I understand the objections the opposition now has to that—which could be done by classifying the lead issue as, under the terms of the contract, a minor defect, but of course it is not a minor issue. No-one would ever suggest that it is a minor issue, but it allowed the state to take control of the hospital construction site, because it is still not gazetted a hospital, and then start to do what we needed to do about the consequences of dezincification

and flushing polyphosphate through the pipes, whilst still keeping John Holland liable, under the terms of the managing contract, for the costs of rectifying the “minor defect”. That is the way it had to be classified so that we could hold the contractor liable for the costs of rectifying that defect.

That goes on. At the time of PC—I think this might be similar to the Leader of the Opposition’s interjection—there were three potential sources: the QEII ring main, which was the view of the contractor; detritus; and dezincification. The polyphosphate has had a not insignificant impact on the dezincification and now we have the latest detailed report from the Chief Health Officer on the thermostatic mixing valves.

The point I want to make is that practical completion could be granted under the terms of the contract with no implications for or impacts on John Holland’s obligations to rectify defects; it is just that we would do it, and John Holland would be charged for the cost. That includes the two-year defect liability period following practical completion. We were always very keen when we took this decision to ensure that the state’s interests were protected in respect of the costs of rectifying the defects, hence the decision to grant practical completion. The Minister for Health will no doubt spend some time going through what has enabled the commissioning process of the hospital and the things that could happen as a result of taking practical completion to hopefully expedite the commissioning process, which in itself is a technical and long process to convert a completed hospital into an operating hospital. I know that the Deputy Leader of the Opposition made the point that things will happen, and that is true; but certainly a lot more could happen once the government took control of the hospital following practical completion. I hope I have clarified that point around practical completion, because it was certainly done on advice from both Treasury and the State Solicitor about the terms of the contract, the obligations to rectify “minor defects” as defined, and to ensure the continuing obligation on John Holland for the cost of rectifying those defects.

Like members of the previous government, this government’s members are no doubt sharing a mutual frustration when we drive past a wonderful-looking hospital that we cannot utilise. We now have increasing risks from the continuing operation of the old facility of Princess Margaret Hospital for Children, which is not satisfactory. The minister has met with the workforce of Princess Margaret Hospital on a number of occasions. That is not satisfactory, and anyone, including me, who has spent time at Princess Margaret Hospital would accept that. Unfortunately, government sometimes has to take a calculated risk in making decisions. But, at all times, in my view, granting practical completion was the right decision. It allowed us to rectify defects that John Holland was refusing to, because it was always protecting itself under the contract. It was also incumbent on us—me as Treasurer, and the Minister for Health—to take decisions that protected the interests of the taxpayer, and that is what we have done.

MR R.H. COOK (Kwinana — Minister for Health) [6.31 pm]: I thank all members for the opportunity to speak on this issue tonight. As the Leader of the Opposition set out in his speech, it has been a very long and frustrating process, but one that we are determined to find our way through. I note for the house, the motion —

That this house calls on the McGowan government, in the interests of public health and providing surety to the community, to immediately identify and begin testing across Western Australia all thermostatic mixing valves installed at public facilities, similar to those installed at Perth Children’s Hospital, and to conduct thorough visual and chemical testing of the QEII ring main to rule it out as a source of lead.

I will deal with the content of this motion, although it seems that members opposite have been more interested in talking about the issues around practical completion. I assure the Leader of the Opposition that the government will not be supporting this motion. I do not think the Leader of the Opposition wants this motion to be successful anyway. The reason is that, ultimately, he is not looking for a long, ongoing, difficult and expensive testing regime across the state; he is looking for clarity around the issues of the thermostatic mixing valves.

Dr M.D. Nahan: And the ring main.

Mr R.H. COOK: I will come to that in a jiffy but, on that issue, the government has said all along that this is not necessarily about the thermostatic mixing valves. In the press conference he gave last week, the Chief Health Officer confirmed that he does not believe the problem is the thermostatic mixing valves alone and that we have to understand that the valves are part of an assembly box that has a range of fittings around it. This diagram shows members assembled the thermostatic mixing valve. I guess this is an issue around nomenclature. But all kinds of other pipes go into that, both cold and hot, that make up the rest of the assembly box. Indeed, I think the Leader of the Opposition said these come from Sweden and they should be of a high quality, and indeed we have that assurance that they are. In relation to the information around the thermostatic mixers, the report states that the brass bodies are made from dezincification-resistant brass. As I confirmed for Hon Peter Collier earlier today, the thermostatic mixing valves are indeed manufactured in Sweden, but the assembly boxes are put together in both the eastern states and locally. That is, they are sourced from within the country, as opposed to just these particular items, the TMVs, which are sourced from Sweden. It is the nature of the TMV assembly boxes, rather than the TMVs, that the Chief Health Officer was trying to draw our attention to. He is saying that the TMVs themselves are not necessarily the problem, but he looks around those TMVs and he sees a predominance of brass. As he says

in his report, if we are looking for a potential source of the lead contamination, he believed that was the place to go to really do a rigorous test. Many members have familiarised themselves with his report in which he goes into some detail about testing the water in front of and behind the assembly boxes. The water drawn directly from the assembly boxes has a very high level of lead water that before and after has a lower lead level. His testing regime showed how as small amounts of water are drawn from the taps next to these TMV assembly boxes, at the point when water that originates from the TMV assembly boxes that has been sitting overnight is where the peak occurs, and then it drops off again as water continues to flush through the taps. That is one of reasons he went to such great lengths to rigorously test that theory. The results of his tests are compelling.

The Leader of the Opposition talked about chlorination events and the stagnation that took place in 2015.

Dr M.D. Nahan: No, no, it is —

Mr R.H. COOK: The Leader of the Opposition said May 2015, but I am happy to accept that —

Dr M.D. Nahan: — May 2016.

Mr R.H. COOK: Yes.

Dr M.D. Nahan: The 2015 was when the water came in. There is some uncertainty whether there was chlorination at that time; it's a different report.

Mr R.H. COOK: Indeed. That is the point I am now coming to. I think there probably was a chlorination event in 2015; there definitely was at the beginning of 2016. We have sought advice from John Holland on that, and I will quote—I apologise that this is in some detail, Deputy Speaker—from the Chief Health Officer in relation to this. The Chief Health Officer observes —

... there was a lack of consistent documentation of the chlorination events, evident in the various reports which document different numbers of events (Appendix 8). Chlorine is a powerful oxidising agent, and under Australian Standard 3500, should be introduced into a distribution system at a specified level for a maximum of six hours, otherwise it can lead to corrosion. There may have been up to five separate chlorination events since September 2015, with potentially the most critical event being in January 2016 (Appendix 29). Documentation on chlorination events was not available to the authors of the Jacobs Report and were also requested by the State, on 7 February 2017, at the PCH Commissioning and Transition Taskforce meeting; SPAS reported that a response was received from John Holland Pty Ltd (JHPL) but lacked sufficient “*actual data*”. It was noted that chlorination had taken place as part of disinfection of the system. No confirmation was provided that chlorination fell within manufacturers’ recommendations and guidelines. JHPL was again requested to confirm how new pipework was sanitised and flushed. Eleven weeks after the initial formal request for documentation, and after multiple unsuccessful follow-up requests, the action was closed at the Taskforce meeting on 26 April 2017 without the requested documentation.

Members would understand the frustration of the people associated with the project at this point, because, as we understand it, as does the Leader of the Opposition, the nature of those chlorination events and what happened directly after—that is, was appropriate flushing done?—is pivotal to determining the potentiality for the dezincification. Nevertheless, Jacobs had some firm recommendations for dezincification. Its report concluded —

The following report identifies the likely source of lead contamination is the Watermarked brass fittings utilised within the plumbing infrastructure as a result of the leaching of lead from the brass, which has occurred in conjunction with and may have been exacerbated by, a brass dezincification process.

The Jacobs report goes on to state —

The introduction of an orthophosphate corrosion inhibitor should be considered to reduce the impact of dezincification to existing brass fittings both short and long term.

There is a very clear line of recommendations on these things. I confess that, as I was listening to the Leader of the Opposition tonight, at times I felt as though I was back in pre-March mode. When I was in opposition I, too, had very strong suspicions about the ring main. That was the reason I put questions to the then Treasurer and then Minister for Water, both through Parliament and via the media, asking whether testing was going on outside the ring main and whether there was a potentiality—I think I even mentioned it—at Ronald McDonald House. The then Treasurer assured me that no such contamination had taken place and that stringent testing was going on at the rest of the QEII site.

Dr M.D. Nahan: As with you, that is what I was told.

Mr R.H. COOK: Indeed, and I have no reason to believe otherwise.

I also want to confirm this for members by repeating the advice we received about the ring main: the Department of Health conducted two detailed inspections of the QEII ring main on 30 January and 7 April this year. On both occasions, the integrity and satisfactory condition of the ring main, associated connections and offtakes was confirmed. We are convinced that if the ring main, or dead leg, as we referred to it last year, was ever a contributing factor to the lead contamination, it certainly was not by the time the Jacobs report was published in April this year.

Dr M.D. Nahan: I agree that it is probably not the cause now, but it was in 2015 when the water was first flushed in the hospital. I think junk came from that and laid stationary for 15 months. I believe that was not so much a cause of the dezincification but a result of the clear accumulation of the detritus and risers in other places. Hopefully, that has been flushed out.

Mr R.H. COOK: I do not step back from that, because I think that, potentially, is the case. In the early days, that would have added to the stagnation of the water in the pipes. Chuck in there a bit of hypo-chlorination and we really do have a recipe for disaster. I am confident that to the extent that that was or may have been a contributing factor, it is no longer the case and that at the moment we are looking plainly and simply at a process around dezincification.

Dr M.D. Nahan: Did the Department of Health go and actually scrub? That is what they do with pipes, I understand; they put a scrubber down them just to clean them out. Is that what the department did or did it just take water off the top?

Mr R.H. COOK: I think it was before I got there. I think it was the exhaustive flushing process that the previous government did after the iced solution proposal.

Dr M.D. Nahan: No, that was in the Children's Hospital; I mean the ring main. What they do, as I understand it, is remount and ream out and clean off the pipe.

Mr R.H. COOK: My apologies. I do not know.

Dr M.D. Nahan: Also, the Jacobs report identified 19 events of above-level lead at the ring main at the entry to the hospital since January of this year.

Mr R.H. COOK: I should emphasise that when it comes to water quality issues, occasionally there will be a spike in lead or other elements. That is why we aim for an average 95 percentile for satisfaction. That is the number we are getting to. We have gone from a 74 per cent pass rate of the polyphosphate process to a level now of about 84 per cent. The Chief Health Officer is telling us that we are making progress but he does not think that, of itself, that will be enough to get us there. Hence the reasons for his recommendations.

The issue most members raised was of practical completion and whether the government should have taken practical completion. As the Treasurer pointed out, we did so because we wanted access to the site so we could undertake our own treatment process and our own testing so we could get much greater clarity around these issues. To give members a sense of this, prior to the Chief Health Officer coming in, we would test around 57 points in the hospital that were selected for samples. The Chief Health Officer took samples from 300 points randomly selected from the around 1 500 outlets in the hospital. Statistically, it is a very significant sample and it is also randomly selected. He did not simply say, "We're going to do it with this tap." He did a random selection and did the testing with those points. I believe that the Chief Health Officer has undertaken the most thorough analysis I have seen to date for not only his analysis but also the rigour with which he has tested the theories that lie within it.

The Deputy Leader of the Opposition talked about ball valves. I think she called them balance valves but I think that they are ball valves, which exist in the 50 millimetre lateral pipes that run along the ceilings on each floor. The Chief Health Officer tested those also and found, to some extent, elevated levels of lead, but nowhere near the level in the testing that took place near the assembly boxes. As the Chief Health Officer said, if we wanted to get to the source of the problem and the nub of the matter, we had to go to where the money is—that is, the assembly boxes, in the first instance. It is my understanding that those ball valves were supposed to be stainless steel and the contractor was explicitly instructed that they be stainless steel, but the Chief Health Officer observed that they were brass. That is clearly not consistent with our expectations for those fittings.

In addition to the extensive work that the Chief Health Officer was able to undertake by taking practical completion, we have been able to undertake another important range of activities associated with the preliminary work around the commissioning of the Perth Children's Hospital. That involves testing emergency and call systems, starting to test systems inside the pharmacy and starting to stock pharmacy cupboards, wards and so on. A whole range of activities are now taking place in the building because it is ours. As a result, we have a much more truncated expedited process around commissioning when we get the all-clear from the Chief Health Officer.

Dr M.D. Nahan: In January, two major issues were outstanding—the laboratory of course and the issue of Schneider Electric, the European firm that is doing the high-end communications. Is the Schneider contract finished?

Mr R.H. COOK: Does the Leader of the Opposition mean under practical completion? Would it or did it?

Dr M.D. Nahan: Under our watch it had not been completed. That was another reason why it was a serious issue.

Mr R.H. COOK: There are outstanding defects at the moment. I think Schneider is associated with the electrics.

Dr M.D. Nahan: Yes.

Mr R.H. COOK: There are still some issues in relation to that. The Schneider–John Holland relationship is not a happy one; nevertheless, John Holland remains liable for the work Schneider does as one of the subcontractors.

On that point, the Deputy Leader of the Opposition asked: why would we make full and final payment if we have not had sign-off? That is the very point. We have not made full and final payment. A range of defects still need to be resolved. There is an idea that John Holland is no longer onsite. It is onsite; it is working day in and day out resolving the outstanding defects of which there are well over 1 000. But the relationship has changed. They are on our site; we are not on theirs. That is an important change. The Deputy Leader of the Opposition said that if we have not had sign-off, we should not have made final payment. I can assure her that is definitely the case.

The member for Dawesville said he was worried about my language. The language I use is the language in the advice we have received from key advisers and it is associated with the Chief Health Officer's report. As I emphasised today in question time, it is not our report; it is the opposition's report and everyone else's report because the Chief Health Officer is a statutory officer; I cannot direct him.

Dr M.D. Nahan: You commissioned him.

Mr R.H. COOK: Yes, I can commission and I did commission him. I asked him to have a look because at the end of the day, as I said, his opinion is the only one that matters and that is why we want him to satisfy himself about the nature and extent of the problem and then, as he suggests on where to from here, carefully design, install and commission new thermostatic mixing valve assembly boxes to avoid recurrence of the problem. This goes to the question the member for Churchlands asked: where is the work plan? Indeed, we are not at that point yet. One of the things we have been doing all along has been to provide members opposite with the information as quickly as it has come to us. We will provide that information towards the end of next week if we can about where to from here. He is the Chief Health Officer; he is not a builder, contractor or construction worker. It will be up to others responding to his report to put that information in place, and we will provide that information. The practical completion issue that the Leader of the Opposition spoke of is a complex one and not a decision that we took lightly. The Leader of the Opposition is right to identify documents in the lead-up to that decision that provide some insight into some of these deliberations. As the Treasurer said, we took practical completion with defects understanding it is a major issue, but a defect, because we needed to move forward in a way that will resolve the issue once and for all.

I am going over my notes on the Leader of the Opposition's speech. I appreciate it was a cathartic experience, so I want to make sure I tick off on all the points that he raised.

The Leader of the Opposition also talked about this being an entirely unique situation and, in many respects, he is absolutely right. We have taken some advice from Canada. There was a commission of inquiry into lead levels in a building in Hong Kong from which we have taken some learnings. We will utilise some of the rigour involved in that to continue to resolve these issues.

The Leader of the Opposition was very much focused on the thermostatic mixing valves. It is not the TMVs and the assembly boxes but the entire component about which we are most anxious. We have checked the ring main and remain satisfied.

Dr M.D. Nahan: There is an issue with checking the ring main and I am not trying to be paranoid. The Department of Health, which does your checking, is also responsible for the ring main.

Mr R.H. COOK: The Leader of the Opposition observed that that is an unusual situation and it is one of those historical curiosities.

Dr M.D. Nahan: Curtin University has a ring main that it manages on behalf of Water Corp, but my concern here is that it would be useful to have Water Corp going there and probably taking it over or doing the inspection, rather than the Department of Health oversee its own facility.

Mr R.H. COOK: In relation to that pipe—yes.

Dr M.D. Nahan: Yes. Given what the Building Commissioner said.

Mr R.H. COOK: That may be what we ultimately have to do. But it does strike me as unusual. That whole ring main runs up Monash Avenue and down Smyth Road—it probably does not go that far—down Aberdare Road and back along Hospital Avenue. It is unusual that it is owned by the Department of Health or the Queen Elizabeth

Extract from *Hansard*

[ASSEMBLY — Wednesday, 16 August 2017]

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Dr Mike Nahan; Mr Sean L'Estrange; Mr Zak Kirkup; Mrs Liza Harvey; Mr Ben Wyatt; Mr Roger Cook

II Medical Centre Trust. It strikes me that this is water infrastructure and from that point of view should probably reside with Water Corp. I am sure we will revisit that issue down the track.

As I said, I do not think that the opposition really believes in the wording of this motion. I understand the way it has come to it, but it is not the thermostatic mixing valves and it is not the thermostatic mixing valves as they may exist in other buildings in other parts of Western Australia. The thermostatic mixing valves are part of an assembly box. With your indulgence, Deputy Speaker, I want to show members this picture, which for the purposes of *Hansard* shows an assembly box on the left, which is specified in the contract. Members will see even from these details that it has a predominance of silver or stainless steel fittings around the thermostatic mixing valve. In this photo on the right, which is taken from the building, we see a very different sort of beast all together and a lot of brass.

The Chief Health Officer makes the observation that on the brass fittings that it inspected, there were no watermarks. The Building Commissioner has not had an opportunity to respond to this report properly. He is on leave at the moment, but in passing he said that just because it does not have a watermark does not mean it does not meet Australian standards, but he said that that is unusual. The Chief Health Officer is not a plumbing expert. He is a health expert and someone in whom we place a lot of faith. Of course, ultimately, he will give us the okay to start the commissioning process for this hospital. At the end of the day, this hospital has to be in such a condition that the Chief Health Officer is satisfied that not only next month, but six months from now and six years from now, the hospital will continue to provide clean, quality water for the kids in that hospital. The Chief Health Officer is looking not just at the test results but also the regimes that are being employed to make sure that the water quality is maintained into the future.

Debate adjourned, pursuant to standing orders.

House adjourned at 7.00 pm
