New South Wales Government
Independent Planning Commission

TRANSCRIPT OF MEETING

RE: SPRINGVALE WATER TREATMENT FACILITY MODIFICATION 11 – WATER MANAGEMENT DURING POWER OUTAGES (SSD-7592 MOD 11)

DPHI, WATERNSW AND EPA MEETING

PANEL:	NEAL MENZIES (CHAIR) SARAH DINNING
OFFICE OF THE IPC:	STEVE BARRY BRAD JAMES CALLUM FIRTH
DEPARTMENT OF PLANNING, HOUSING AND INFRASTRUCTURE (DPHI):	JESSIE EVANS GABRIELLE ALLEN POLINA GOLBERG CLAY PRESHAW
WATERNSW:	JURI JUNG CAMILLA EDMUNDS
NSW ENVIRONMENT PROTECTION AUTHORITY (EPA):	STEVE ORR SHERIDAN LEDGER
LOCATION:	ZOOM VIDEOCONFERENCE
DATE:	1:30PM – 2:30PM MONDAY, 17th MARCH 2025

<THE MEETING COMMENCED

MR BRAD JAMES: There we go. Thanks. I think that's everyone.

MR NEAL MENZIES: Okay. We've got everyone. Hello Clay, Sheridan, Polina. Who else have we got? Steve, jumping between screens, I can see everyone. Juri, Gabby, Camilla. Okay.

Well, firstly, welcome. As you know, I have a formal statement to read before we kick off, so I'll do that and then we'll move to our more informal mode of having a general discussion.

So, before I begin, I'd like to acknowledge that I'm speaking to you from the land of the Turrbal and Yugera people here in the Brisbane River Valley. I acknowledge the traditional owners of all of the countries from which we're meeting virtually today, and I pay my respects to their Elders past and present.

Welcome to the meeting today to discuss the Springvale Water Treatment Facility Modification 11 currently before the Commission for determination. My name is Neal Menzies, I'm the Chair of the Commission Panel and I am joined by my fellow commissioner, Sarah Dinning.

We're also joined by Steve Barry, Brad James and Callum Firth from the Office of the Independent Planning Commission. In the interests of openness and transparency and to ensure a full capture of information, today's meeting is being recorded, and a complete transcript will be produced and made available on the Commission's website.

This meeting is one part of the Commission's consideration of the matter and will form one of several sources of information upon which the Commission will base its determination.

It's important for the commissioners to ask questions of attendees and to clarify issues whenever it's considered appropriate. If you're asked a question and you're not in a position to answer, please feel free to take the question on notice and provide any additional information in writing, which we will then put up on our website.

Finally, I ask that all members here today introduce themselves before speaking for the first time, and for all members to ensure they do not speak over the top of each other, to ensure accuracy of the transcription.

Okay, so we can now begin. All right, are we going to jump straight into questions, or did the Department have a bit of a coverage that you wanted to put up over first?

MR CLAY PRESHAW: Clay Preshaw here, Executive Director of Energy, Resources and Industry. How are you? Look, I think we're happy to start with a

few comments and continue on in that way or take questions as they come up through that. I think Gabrielle has some comments that we can work through and then we, as I say, I'm happy to take it as a Q&A as we move along.

MS GABRIELLE ALLAN: Okay, so my name is Gabrielle Allan. I'm a Team Leader in the Resource Assessments Team. My colleagues, Polina Golberg, is a Senior Assessment Officer in that team. And my manager, Jessie Evans, is here but unwell, so she probably won't be speaking too much today unless needed.

So, we do have some – we do have a presentation with a few figures and some discussion around context for both the catchment and the modification, and some comments then around the Department's assessment of the project. So, I'm not sure if someone has the presentation, but that could go up at any point if that's available.

MR JAMES: Sure.

MS ALLAN: So, I think firstly to provide a bit of a brief context for the catchment and the integrated water management system that operates between Centennial's mining operations and the Mount Piper Power Station. The Water Treatment Plant was constructed following the approval of the Springvale Mine Extension Project, and that was to remove historical discharges of mine water into the upper Coxs River catchment and provide a beneficial reuse option for this water at the power station. At the same time, this reducing water taken from the catchment for those power station operations.

So, the plant is located in the Coxs River catchment, which is part of the Sydney Drinking Water catchment. And the Coxs River flows south towards Lake Wallis, Lake Lyell and ultimately to Lake Burragorang which is the primary reservoir for Sydney's drinking water.

So, flows in the Coxs River are regulated by three reservoirs in this area. You've got the Thompsons Creek Reservoir, Lake Wallis and Lake Lyell, and those three reservoirs form part of the Coxs River Water Supply Scheme that supplies water to the power station.

To focus in on Thompsons Creek Reservoir, that is a declared dam under the Dam Safety Act, it is a reservoir that was constructed as an off-stream storage specifically to provide water to the power station. And Energy Australia manage that dam and the water levels within that reservoir, and they do that through a combination of controls through inflows from the Springvale Water Treatment Plant, top-ups from Lake Lyell, and then daily environmental releases from the reservoir and where necessary, emergency discharges where there's a risk of overtopping of that dam.

So, the Springvale Water Treatment Plant processes mine water from Angus Place and Springvale coal mines. The processed mine water is reused at the power station for its cooling needs and any excess treated water is transferred to

Thompsons Creek Reservoir. The treatment plant first filters that incoming mine water to remove solids and then passes that filtered water through a reverse osmosis treatment unit, and that reverse osmosis unit generates brine waste streams, so a liquid brine, and then some of that liquid brine is crystallised in a brine crystalliser and forms solid salts.

The operation of that plant has not been without its challenges. Since commencing operation in 2019, there has periodically been the need to bypass the reverse osmosis treatment process and transfer partially treated or filtered water to Thompsons Creek Reservoir. And the reason for that has primarily been to do with the sensitivity of the plant to variations in water quality, and that has at times limited the capacity of the treatment plant.

The approval for those transfers of partially treated water under an interim water management strategy expired in October of 2023. But this current modification is driven by another limitation of the plant's operations, and that is around the availability of brine storage and disposal options. So, in this instance, during power station outages, water usage and ash production is significantly reduced, and that reduction in ash means that the liquid brine that's generated by the plant can't be combined and co-disposed of with the ash from the power station at the same rate. And that means you get an excess of liquid brine.

Now, some of that brine is sent through the brine crystalliser to generate solid salts, and that can be disposed of in the ash emplacement area at any point in time. However, that brine crystalliser doesn't have the capacity to deal with the full volume of liquid brine that is generated by the plant. So, once the brine storage ponds at the Mount Piper Power Station are full, the ability of the treatment plant to continue operating is limited.

So, with these factors in mind, I'd like to reiterate to the Commission the importance of the treatment plant in both improving water quality within this part of the catchment and supporting the operation of Springvale Mine, which is, yes, the main supplier of coal to Mount Piper Power Station.

So, I guess, firstly if we go to that issue of water quality, the commissioning of the water treatment plant in 2019 dramatically reduced the volume of saline mine water what was discharged to the catchment, which has seen a corresponding decline in salinity in that downstream catchment.

It's interesting to note that that declining trend in salinity in the catchment has continued despite those periodic transfers of partially treated water to the Thompsons Creek Reservoir as part of that previously approved interim water management strategy.

If you pop to the next slide, Brad. We can see that water quality in the reservoir is generally better and less saline than the downstream catchment water quality. As you can see on this figure, the Coxs River be 879 micro siemens whereas the reservoir is 525 micro siemens per centimetre, and that's based on the 12 months

of data to October 2024, and that's a 95th percentile measure.

We note that these levels are still above the ANZECC guideline trigger values for upland rivers, which is 350 micro siemens per centimetre. But those levels are still within the drinking water guideline value considered to constitute good quality drinking water, which is around the 940 to 1,000 micro siemens per centimetre.

Water quality monitoring results from WaterNSW demonstrate that there's been a declining trend in salinity levels in the catchment since the treatment plant commenced operation and, in our view, this is a good reason to continue the operation of the plant and that is considered to be in the public interest.

Secondly, the treatment plant is an essential component of the water management system for Springvale Mine, enabling Centennial to manage mine water inflows and continuing to supply coal to the power station. As I mentioned, Springvale Mine is the main supplier of coal to the power station, which provides around 10% of the state's electricity and is becoming increasingly important in ensuring reliability going forward as the state transitions to renewable energy. It provides firming capacity during periods of high demand.

There's also no commercially viable or approved alternative coal supplies to Mount Piper Power Station. And the New South Wales Government's energy security advisors have confirmed that New South Wales would face increased electricity reliability risks were the water management at Springvale Mine to fail and the mine to permanently cease production.

To provide some context specifically for this modification. As I discussed earlier, Centennial operates a complex mine water management system that involves balancing water storage capacity at its Springvale Mine and Angus Place Mine with water treatment capacity at the treatment plan.

Storage capacity within those mine workings has been significantly reduced in recent years, due to an unanticipated increase in mine water make at Springvale Mine. So, even with the treatment plant operating at or near capacity in recent years, storage capacity in the mines has reduced to such an extent that any significant interruptions to water treatment can result in groundwater inflows threatening to flood the mine workings. The Department understands that what capacity exists within these workings is required to manage unanticipated interruptions to treatment capacity that arise from those variations in inflow water quality and also unplanned outages at the power station.

So, given the extended planned outage at the power station in April and May, a temporary water management system solution is required. To avoid flooding of the mine workings, Springvale Coal has submitted this modification application seeking approval to transfer treated and partially treated water to Thompsons Creek Reservoir for the duration of the outage.

So, if we pop to the next slide, which should just show the highlights of the

modification, which are to transfer up to 24 megalitres a day of partially treated water or up to 42 megalitres of blended water per day to Thompsons Creek Reservoir. And for the purposes of this modification, when we refer to "partially treated water", we're talking about that filtered water that has had solids removed but has not been through the reverse osmosis treatment component of the plant. And "blended water" refers to a blend of the partially treated water with fully treated reverse osmosis permeate.

Water transfer services are proposed for a duration of up to 54 days for the outage, plus a buffer period either side of that outage. And assuming up to around 75 days of water transfer. We'd note that there have been some amendments to the modification since it was originally submitted, which has come in response to issues raised by agencies, in particular the EPA and WaterNSW.

If we go to the next slide, some of those key amendments are shown. So, the original application proposed to undertake these water transfers for all outage periods between 2025 and 2038. That has been amended to simply cover this current planned outage for April and May.

Some other elements have been modified as well, and one of those is the water quality transfer limit within Thompsons Creek Reservoir was originally proposed the transfers would cease once salinity reached 650 micro siemens per centimetre. That has been reduced to 600. As well as a reduction in the proposed environmental releases from Thompsons Creek Reservoir which have historically been up to 18-and-a-half megalitres per day. The water access licence, Energy Australia's water access licence for the reservoir has set a minimum daily volume for releases from the reservoir of 0.3 or 0.8 megalitres per day, depending on the time of year, and Centennial has committed to restrict those releases to those minimum volumes.

So, the key assessment issue for the modification is obviously water quality impacts, both within Thompsons Creek Reservoir and in the downstream catchment. The assessment supporting the modification application demonstrated that the salinity in the reservoir is predicted to remain within the range of historical variability in the reservoir, and would remain below that drinking water guideline value considered to constitute good quality drinking water.

Importantly, water quality in the reservoir and the daily environmental releases from the reservoir would have a lower EC than the downstream catchment at Lake Wallis, even with the modification. And for this reason, the Department considered that it's unlikely that the modification would adversely influence local catchment water quality.

The Department considers that there'd be even less likelihood of adversely influencing water quality further downstream in the catchment beyond Lake Lyell.

The analysis also looked at total salt loads. It showed that the predicted increase in salt load associated with the daily environmental releases from the reservoir would

be minor and unlikely to adversely impact long-term catchment water quality. So, based on these findings, the Department considered the modification would not have a material or long-term adverse impact on catchment water quality or on drinking water quality in the Sydney drinking water catchment. WaterNSW confirmed and the Department agrees that the modification is unlikely to adversely impact water quality.

The Department also looked at the mitigation measures and monitoring measures proposed by Springvale Coal, and we consider those to be appropriate and that suitable conditions are in place under the consent to ensure compliance with the commitments that have been made by Centennial.

If we go to the next slide, that just talks about some of the mitigation measures proposed. So, in terms of looking at capacity of the reservoir, Centennial is looking to pre-emptively lower the water level in Thompsons Creek Reservoir prior to commencing transfers, to ensure there is sufficient capacity within that reservoir and avoid the need for those higher levels of environmental release or in fact an emergency discharge as a result of this modification.

And as is the case currently, water transfers from the treatment plant would cease if water levels in the TCR reach the set high operating level. There's also a water quality trigger to cease transfers to the reservoir, and that is set at the 600 micro siemens. We've discussed limiting those environmental releases to the minimum daily volume required by the licence. And there will also be a new continuous water quality monitoring installed in TCR to ensure compliance with those commitments.

The next slide has some information about reporting requirements proposed for the modification. So, there are a series of standard reporting requirements that exist under the consent, and those are in terms of the annual review and the reporting that's required around existing site environmental management plans. Specific for this modification, Centennial would notify the EPA and WaterNSW both prior to commencing these transfers and if EC levels in the reservoir exceeded 550 micro siemens per centimetre.

So, overall, the Department's consideration was that with the implementation of these monitoring and management measures, that water quality impacts in the reservoir and the downstream catchment can be managed within acceptable environmental limits.

The Department acknowledges that there's a lot of interest in this modification from the local environmental groups and we recognise that they've worked for many years to protect and improve environmental outcomes in this region. We appreciate their perspective that the treatment plant was designed to improve catchment water quality, and that its effectiveness shouldn't be undermined.

At the same time, the Department recognises the water management challenges at Springvale Mine that threaten its operation, and without a solution to these

challenges, New South Wales faces increased electricity reliability risks, particularly at periods of peak demand.

So, that brings us to the topic of alternatives. And we note that a number of alternative water management strategies have been considered by Centennial. A number of these are outlined in the submissions report for the modification. And the Department agrees that the strategies considered by Centennial are not feasible due primarily to the timeframe required to implement them. I mean, there are other factors at play in terms of a lack of relevant approvals and the environmental risks, and risks of inundation of the mining works that are associated with those various alternatives.

But I guess, yes, the primary factor for this modification is the timeframe required for to have a measure in place to deal with the upcoming outage in April and May. We also agree that the "do nothing" option is not desirable, would increase the risk of flooding at Springvale and Angus Place. Flooding of mine workings has the potential to result in loss of equipment, sterilisation of coal reserves, and a permanent cessation of production that would leave Mount Piper without its main source of coal. The Department considers that this wouldn't be in the public interest due to the potential risk to energy security.

Further, the Department acknowledges that flooding of the remaining mine workings increases the risk of an uncontrolled discharge of untreated mine water from the mine into the catchment. The Department considers that this would result in a poorer environmental outcome than has been proposed by this modification, and it would not be in the public interest.

That's not to say that there are not alternative strategies that may potentially be feasible to address future power station outages, and that should be pursued by Centennial. And we understand that Centennial is investigating a range of options to deal with future outages.

In the short term, however, the modification would provide additional storage capacity within the water management system during the upcoming outage. And importantly, it's our view that the modification would not negate the significant improvements that have been made to water quality within the catchment since the commissioning of the treatment plant. And the Department agrees that the modification is the preferred option to manage excess water during this outage period.

We have carefully all the issues raised throughout the assessment process, and we have worked very closely with the key government agencies, in particular EPA and WaterNSW, to resolve their concerns. We've also considered whether it's in the public interest to allow the modification to proceed, and on balance, the Department considers that it is in the public interest and approvable, subject to the recommended conditions of consent.

So, yes, thank you for your time and happy to answer any questions.

MR MENZIES: Okay. Thank you for that presentation. We two commissioners did a site visit on Friday. We've also had the opportunity to read through all the various material and it's interesting that this is a mod that's attracted a lot of public interest, and we have some very good submissions from some of the environmental groups. And so I wanted to just pursue with you a couple of thoughts out of those submissions by the environmental groups.

One of the concerns that they raised is that if you move further up in the catchment, so before you get into the area that's adversely effected by coal mining, the water quality of the upper catchment's very good indeed, variously reported as 30 or 50 micro siemens per centimetre electrical conductivity. So, we're really making a comparison of release water not with the quality of water flowing into the catchment, but the quality of water flowing out.

So, I can see the point that they're making very well indeed, that we're comparing release with a badly contaminated catchment which would not seem consistent with the NorBE expectations of neutral or beneficial change of anything that we're doing. How did the Department think about that?

MR PRESHAW: Look, I might start – it's Clay Preshaw here, and I'll throw to Gabi and perhaps even to EPA if they wanted to comment. But firstly, the comments around what the salinity are upstream, I'm not exactly sure if those numbers are accurate or not – we could certainly take that on notice and have a look at that.

But I would say that when we're assessing an application like this, even if it's a mod or if it's a whole new DA, the process is that we look at the impacts of the application of the development or the modification on the receiving environment. So, it is appropriate, I'm sure the EPA and WaterNSW would agree, that we look at what is happening from this activity and how that would affect the water quality and the catchment downstream from that activity.

So, I guess it's probably not really for us to comment on the quality of the water in other places of the catchment. But certainly it has been a focus, as Gabi outlined, of this assessment, to ensure that the impacts downstream from this activity are carefully considered and are, I guess, broadly in line with what we've been trying to achieve over the last decade or so in this part of the catchment.

I don't know whether the EPA could comment on whether the quality of water is what has been described perhaps in some of the submissions, but again it's probably not super relevant to our assessment, which is very constrained to the impacts of this activity. It's probably something we could go away and have a look at and provide some commentary to you, if you want, at a later stage.

MR MENZIES: We noted in exactly the same way as you did that, you know, saying that the water quality is very good is quite different to having a substantive study that establishes that. So, we've asked the people that we had along on our

site visit from the environmental groups to provide some substantiating evidence there. It's interesting that we're all talking about downstream effects, because we know that the water that's being transferred to Thompsons Creek Reservoir is going to be released from Thompsons Creek Reservoir.

I'm interested in that one too in the sense that the original development for Thompsons Creek Reservoir – I couldn't find how the riparian release limits were set. So, clearly the minimum release represents the flow that you would anticipate in a catchment of that scale in summer and winter. But I wondered what the maximum release represented. Does anyone know that? It wasn't detailed in the original documentation.

I'm just concerned that we're using that as a – well, they're allowed to release at 18 megalitres a day, but that might have represented the peak flow in an extreme rainfall event rather than something that should happen 200 days a year.

MR PRESHAW: Yes, I think the answer to that question is probably that you would need to speak with DCCEEW [NSW Department of Climate Change, Energy, the Environment and Water] Water, the water division of that department. Because it is a water access licence that is set under the Water Management Act, and we don't unfortunately have anyone from there here today.

I think, Gabi, you might be able to, or Jessie might be able to comment on just exactly what that upper limit is and what the lower limit is, how that relates to what normally happens and what is going to happen under this arrangement. But again, Neal, in terms of how that number is set, that's quite a complicated process that is worked through under the licensing regime with DCCEEW Water. Which, again, we could probably find out a little bit more about that process.

It is such a complicated and, I guess, difficult process that we even at one stage considered whether we should be looking at changing the water access licence as part of this modification. But given there was already quite a wide range that we could work within, firstly, it probably wasn't necessary in this case, but second, it is a difficult process that you have to work through and probably unnecessary in the circumstances.

But Gabi, did you just want to quickly recap – I think you described earlier, but perhaps you could recap on what the upper and lower limits are and how that relates to this modification.

MS ALLAN: Yes, so our understanding from Centennial is that the upper limit of releases is that 18-and-a-half megalitres per day. I'm not sure how that it is set – whether that's a physical limitation of the infrastructure that's there, or whether that's a limitation that's set by the water access licence. I think that would be a question for Centennial or Energy Australia, in fact.

But yes, I'm just quickly while we're talking trying to look up some of the historical data that's available around what the volumes of those releases are. But

that might be something that we have to take on notice.

MR MENZIES: Yes. They reported that they release around 4,000 megalitres a year over the last few years. Originally, they were releasing just the environmental flow. But as the flow to their mines has increased, this has become –

MS ALLAN: It's also increased, yes. Yes. So, sorry, just looking at some of the compliance reporting, it's varied between 7-and-a-half megalitres per day on average to 12.75 megalitres per day on average over the last, what's that, the last couple of years since July 2023.

MR MENZIES: Which makes that flow about a quarter of the Coxs River flow downstream.

MR PRESHAW: Yes, and I think one comment I would make in relation to the change or the, I guess, perceived increase at this point from releases out of the reservoir. You would probably need to look more broadly across the operations of the mine and the catchment as to what else has happened in that time. Because, as you probably know, some of the licence discharge points have historically had a lot more untreated discharges in the past. So, while the number at the reservoir may have increased extensive releases, that probably aligns with a decrease in discharges at licence discharge points from the EPA – under the EPA's PEOA requirements.

Again, we might need to – if you have questions around that sort of broader catchment perspective, we could probably respond to that also.

MR MENZIES: Sarah, I'm tending to dominate this conversation. Did you want to jump in?

MS SARAH DINNING: Look, I'm happy if you keep going, Neal, because some of my questions have been ticked off, if that's okay, but …

MR MENZIES: Absolutely.

MS DINNING: Thank you.

MR MENZIES: The other, and Clay, once again, this is a difficult question to answer. It was a difficult question for me to think about. But the alternatives that were presented, I agree that they were not likely to be viable. But I do wonder whether all of the possible alternatives were indeed presented.

One of the key limitations to – one of the things that's forcing this application is the disposal of brine and saying we don't have fly ash to mix it with. But they do have a fly ash impoundment that has a huge amount of dry fly ash underlying it. The hydraulic conductivity is reasonably high, so you could expect a reasonable infiltration rate into the stacks that they have, so you could irrigate the brine onto that rather than mixing it with dry material.

They have a lined residue disposal bond that, last time I visited, so 18 months ago, was a truly massive storage and wouldn't have much difficulty receiving a couple of hundred thousand litres a day for the period of time that we're talking about.

So, is the Department satisfied that the alternatives that were presented were truly the best alternatives that were available to the company? Now, you know, those are two off my head from a single site visit.

MR PRESHAW: Yes. The simple answer to your question is yes, we are comfortable that the alternatives that have been considered are probably the best alternatives available and still don't stack up. Having said that, even since we referred the report to the IPC, we have had other ideas come to us from various places. One of which is I think a variation on the theme that you were mentioning around.

Given the main constraint is the ability to deal with the brine because of the lack of ash that's being produced from the power station, can we not just obtain ash from somewhere else, and you mentioned a few different places or potentially what we've considered against, I think, since we referred to as can we truck in ash from somewhere or could we acquire ash from a different site and use it to combine with the brine.

All of those options are very difficult and lead to probably other changes in approvals, possibly multiple approvals that are very strict around what you can do in terms of the operation of dams, for example, you're referring to, or even just the operation of trucking etc. receiving and sending those sort of volumes of ash would probably require other changes. That's if you could find the appropriate source of ash.

So again, maybe that hasn't been described in a great level of detail in our report or in some of the documents from Centennial, but I think from the expert advice we're receiving across government and from the independent panel, that didn't seem – that was not a viable option for us to consider in this case.

But again, if you've got – but you did mention specific locations perhaps you could acquire ash from, we're happy to go away and look at that and respond.

MR MENZIES: Clay, I'd argue the other way. The ash-to-water ratio, it's only about 12% brine, so you would truck a 10^{th} less trucks – 10% of the trucks would shift all of the brine in the other direction.

MR PRESHAW: Yes.

MR MENZIES: So, once again, it seems like that's an irrational suggestion rather than the rational suggestion.

MR PRESHAW: I think in our view the best alternative to this proposed

arrangement is simply to flood the mine workings. And I think if they are unable to do what they're proposing here, that will in reality be the situation we'd all find ourselves in.

Now, as far as we can understand, there is sufficient space or inventory, I think is how they refer to it, to probably take really all of what we're worried about here. But it would be quite close in terms of what space is left and would reduce the opportunity to use that in any future scenario. And really does bring forward the risk of either sterilising large areas of coal resource and the subsequent energy security issues that that brings. In addition to bringing forward the issue of, well, what happens to the water as it fills the mine and where will that water re-emerge into the catchment at some later stage.

So, as it stands now, there is sufficient space for us to, I guess, collectively as government and the companies involved in this work on that problem with little to no risk of, you know, uncontrolled spills, for example. But if you were to fill up that inventory or to take up that space underground, it really does essentially wedge us into a very uncomfortable situation going forward.

What I think all of that means though is certainly from our point of view at the Department of Planning, and this is really a whole-of-government issue now, we need to understand what the future scenarios are, and we need to be urgently actioning that. And I can tell you that, aside from the existing working groups that we have with the companies on this, we now have another, I guess, high-level government working group that's specifically exploring all of those matters and trying to find a long-term strategy that will deal with the water situation in the western coalfield.

Because I think we can say this is not necessarily just a Centennial or Energy Australia problem, but an issue that exists in the post-mining landscape of the western coalfield, and I would add potentially is a post-mining issue in other parts of the state as well. It's just that in the western coalfield probably this is – the water underground is probably going to be an issue before it will be an issue in other coalfields.

MR MENZIES: Thanks, Clay, that was – that's some really useful thoughts. It seems a bit of a nuclear option to flood the mine, so that's a difficult alternative to accept.

MR PRESHAW: Yes, that's a fair summary.

MR MENZIES: And the term "inventory" is interesting also because to a very large extent in a country like ours, we should always be looking at water as a resource. This water's a bit salty but there are ways of cleaning it up. I don't know how to cast this as a question, it's almost – I'm going to make it as a statement. It surprises me that they don't have twice the reverse osmosis capacity, because we wouldn't have much concern about them discarding into a stream, water of a higher quality, so that the longer term for the company an easy path forward, it

just costs money, is more reverse osmosis.

Can you reveal much about what the Department is thinking for long term? And I do agree this is not just this one coal mine. There's a cumulative effect on the water courses here.

MR PRESHAW: Yes, I can respond at a higher sort of strategic level and to a lesser degree with some specificity relating to this project or set of project. At a high level, maybe just a comment on where you're going initially.

There is, I think, a view within government that given water is often a scarce resource in New South Wales and in Australia, and that this water really isn't of such poor quality that it can't be used in other ways, it's the fact that it's within a catchment complicates things.

The government is certainly interested in what beneficial purposes this water could deliver probably outside the catchment. And when I mentioned there's a whole-of-government working group looking at this, certainly we're thinking as government of this water as a resource that could potentially be used for other areas.

But turning to your – the latter part of your comment or question around the scale at which the treatment occurs currently. I think that is simply related to what happened in the initial assessment process that led to the Springvale Water Treatment Project. So, initially this idea of treating the water came from the approval of the Springvale Extension Project. It wasn't the only option available but was probably the best way to deal with water from mining at Springvale.

And while if they had their time again, they may have tried to increase the capacity of the Springvale Water Treatment Plant, it was more than enough at the time based on the calculations that were given to them from the various models. I think it had something like a 20% buffer sort of included in the capacity, which we now have seen has turned out to not be enough. But that, again, relates to this is perhaps not just a Centennial issue but we're now probably talking about water from various places.

And to upgrade at this point, I think from a commercial perspective, and you would probably need to speak to the company about this, is it's simply not viable. And you'd probably add into the mix that the Mount Piper Power Station, as we all know, has a life expectancy that's coming up pretty quickly, and to invest the hundreds of millions of dollars, again, to increase the capacity of reverse osmosis, I think, it doesn't stack up from a commercial perspective and presumably would put the whole operation at risk of falling down. But again, you'd probably have to ask the company, or companies as it is in this case, whether they've considered that and what that would mean from a commercial and/or economic perspective.

But I think the earlier point around what can we do with this water is probably really where government is looking beyond obviously this modification

application.

MR MENZIES: Yes. I recognise we've only got a few minutes left, so I'm going to go back to Sarah to make sure we're covering the things that she's worried about.

MS DINNING: Yes, no, thank you, Neal, and please, everyone, forgive me if I'm taking you back into something you've already discussed or it's not relevant, so please let me know.

I was just interested in the water monitoring that's being proposed as part of the modification going forward, and is this new and … The question is, what's happening now with water quality monitoring, and it's not adequate for what's going forward and then, you know, like, when we were out there, they hadn't started that process, they were going to start it on Saturday. So, I just wanted some comments about the confidence in the water quality monitoring to manage impacts of this potential … I can see people nodding, if anyone wants to answer this.

MR PRESHAW: Yes, I'll jump in, but I'll have to defer to Gabi on some of the specifics, and if necessary, maybe the EPA or WaterNSW could also comment.

I think at a broad level, there is a substantial amount of monitoring occurring in this part of the catchment, probably more than you would have anywhere else, and that's because of the level of activity that's occurring. Probably the issue that we've experienced in assessing this particular modification and this activity is that maybe we don't have exactly the type of monitoring we were looking for in this, I guess, unusual situation.

There's certainly a lot of data that we can use to assess what we think the impacts will be, and I think more than enough to put up a sufficient assessment of the modification. But I think what we're looking at in terms of monitoring through the conditions of this modification is why don't we use this as an exercise to learn even more about this specific activity but perhaps to help us make informed decisions going forward in other parts of the catchment.

So, I think what we're suggesting is probably over and above in terms of monitoring, but it is just an opportunity for us to do that. I don't know, Gabi, if you wanted to add anything more, or if there's anything I'm missing.

MS ALLAN: Yes, I think the continuous monitoring has been proposed here because I think at present their monitoring is only undertaken on a weekly basis, from memory. So this, I guess, the continuous monitoring is proposed to provide assurance to EPA and WaterNSW regarding that sort of cut-off point for stopping the transfers at a specified level.

MS DINNING: Okay, thanks. And look, if I could just quickly add in, so then we've got in the modification report the number of estimated days they'll be having outages from 2025 through to, I think, 2038. I understand not all of them

are going to be both turbines, but obviously there's going to be a need for monitoring not just for this mod but for all the other outages. So, I suppose the difficulty is going from the modification seeking more coming back down to this, is making sure as well that what's needed for the future, not just for this particular April/May is picked up.

MR PRESHAW: Absolutely. I think if we had more time, we could have potentially asked for further information before we determined this modification application. And that may have allowed us to deal with the proposed mod in the way that they were looking, which was essentially we want to be able to do this whenever there's an outage going forward.

We basically pushed back and said, "Look, we can consider this one outage given the urgency and given the situation we're all in, but we want you to go away during this time and give us absolutely all the information we'll need to consider what will essentially be a later modification process that will either allow for X number of years or potentially if we're comfortable with the situation, for them to do it whenever there's an outage."

But I think it's important for us to get all that extra information from continuous monitoring and the like, and that'll allow us to be really well informed for what will inevitably be another modification or another application at some point. Whether or not that's a separate thing all wrapped up into these broader conversations and strategies for dealing with water, I'm not sure.

But yes, we certainly pushed back and said, "No, look, we're not going to give you this arrangement forever more. We're happy to do it just for this one outage." Now, this outage, as I understand it, is, I guess, the biggest type of outage they have at a power station. My understanding is there's hundreds of people being flown in from overseas and engineers and experts that are, you know, this is not the normal type of outage that may occur from time to time in the power station.

MS DINNING: Yes, okay, great. Look, that was very helpful and thank you. And I think you all just referred as well the unanticipated amount of ex-mine water make – we heard that on site as well. It's quite significant. They were anticipating an order of 1 and they're up to 6 in a couple of years, gigalitres.

So, it is important, isn't it, that it's quite a dynamic environment there in that whole western coalfield water catchment area. So, anyway, look, sorry, that's just not a question, that's an observation. That while they've got outages and engineers, there's also a very fluid (excuse the pun) environment there with water coming out faster than they anticipated.

MR PRESHAW: Yes, I think that's a completely fair comment and again it justifies our reasoning behind dealing with this in what could be criticised as a piecemeal way. But, yes, as you say, it's very dynamic and we don't want to be setting things/rules in place for the future when things are and have been changing quite rapidly.

MS DINNING: Thank you. Thanks, Neal.

MR MENZIES: Gabi, just a reflection on your comment about needing more data. The extra monitoring will be useful. On site we asked for depth samples through the reservoir because we're concerned about stratification. So that there's various streams of information that would be useful for the future.

We also understand they're going to start sampling the quality of the water in the riparian release. So, sampling below the reservoir which will tell us what's being released as opposed to a measure of what was in the dam.

My last comment, and this is getting right down in the weeds, and I'm sorry. But I wondered if using the 95th percentile is the way to make comparisons. It's essentially saying we want to compare what we're going to release with the streams below, you know, at their worst, 5% of the time they're worse than this. Rather than a median value which would feel like more representative of the system. Is there a reason that you, well, the company presented you with 95th percentile data, were you satisfied that that's the best way of thinking about the impact?

MR PRESHAW: I will field that, but I am not a hundred percent confident of the answer, so I may need to, again, defer or take on notice. But the 95th percentile was certainly what we looked at as the primary assessment criteria in the original approvals. But I do think they're typically required to present a range of different levels, including the median, and maybe even like a set of different percentiles.

So, while we may have focused on 95th in the report, I think if you go to the information presented by the company, you'll probably find other comparisons. Is that correct, Gabi? But if you don't know, we can just take that on notice and get back to the Commission.

MS ALLAN: Certainly, all of those, all the stats are provided in the information that was presented, and I was originally looking at medians but found it was a bit confusing because all of – because the information presented in the company's assessment report was all based on the 95th percentile, whereas I like to think in medians, yes, I think really it was just done as a matter of maintaining consistency. Yes, I don't know if WaterNSW have any comments on that as well, because I know they've looked thoroughly at the data in the area?

MS JURI JUNG: Juri Jung from WaterNSW, Catchment Protection Manager. Yes, so in the modification report, the company also provided every gen-median values as well as 95 percentile as well. And a WaterNSW monitoring station within Coxs River E321 and another gating station we also collate the data based on 50 percentile, which is median, an average, and at 75, 95 percentile as well, that's what we are looking at as well.

MR MENZIES: Okay. You shouldn't finish on the down-in-the-weeds question,

but yet I'm going to unless Sarah has something else to ask?

MR DINNING: No, thank you.

MR MENZIES: No? All right. Then it remains for me to thank you all for your input, it's been very useful, some great ideas. Clay, I always enjoy talking to you and I hear we're losing you; that's a shame.

MR PRESHAW: Temporarily.

MR MENZIES: Good luck with the next one. So, thanks everyone and we'll call this meeting to an end.

MR PRESHAW: Thanks for your time.

MS DINNING: Thanks.

MS ALLAN: Thank you.

MR PRESHAW: Thanks, commissioners.

>THE MEETING CONCLUDED