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)

**APPLICANT MEETING**

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| PANEL: | NEAL MENZIES (CHAIR)<br>SARAH DINNING |
| OFFICE OF THE IPC: | STEVE BARRY<br>BRAD JAMES<br>CALLUM FIRTH |
| APPLICANT REPRESENTATIVES: | RON BUSH (Centennial Coal)<br>MICK NADALIN (Centennial Coal)<br>PETER CORBETT (Centennial Coal)<br>PETER GRIFFITHS (Energy Australia)<br>MARK FREWIN (Energy Australia) |
| LOCATION: | ZOOM VIDEOCONFERENCE |
| DATE: | 1:30PM – 2:30PM<br>TUESDAY, 18th MARCH 2025 |

**<THE MEETING COMMENCED**

**MR NEAL MENZIES**: Hello, Ron. Hello, Peter.

**MR RON BUSH**: Hi, Neal.

**MS SARAH DINNING**: Good afternoon.

**MR PETER GRIFFITHS**: G'day everyone.

**MR MENZIES**: Ron, do we have your full team with us at this point?

**MR BUSH**: We're just waiting for a couple additional people – there's probably three more that will log in. So, maybe if you give them a minute or so.

**MR MENZIES**: Yes, no, we can do that, absolutely. We didn't know whether we were going to find you all in a meeting room somewhere or whether there were more yet to join, so.

**MR BUSH**: Yes. I haven't used Zoom for a long time. You might have to – we've got a presentation to go through, so you might have to remind me how you share the screen.

**MR MICK NADALIN**: Hey Ron, I'm just in the car, mate. I'm just going to put myself on mute and that's why my camera isn't on.

**MR BUSH**: Okay.

**MR NADALIN**: Thank you.

**MR CALLUM FIRTH**: Hi Ron, there should be a green share button at the bottom of your screen, and then you go through that and …

**MR BUSH**: Oh, yes, I see it, yes, yes. Okay, yes. Sorry, I haven't used Zoom for a long time.

**MR MENZIES**: I'm the same, Ron, it's – every time I do something for the Commission, my computer will decide, you know, it hasn't used Zoom for ages, it needs to update or it needs to … Yes, so I'm invariably sort of late joining meetings because of it.

Peter, welcome.

**MR PETER CORBETT**: Yes, just getting my head around Zoom as well. Yes. Thank you, sir. G'day all.

**MR BUSH**: Mark Frewin from Energy Australia is going to join us as well. Peter Griffiths, do you know is Mark's still joining?

**MR GRIFFITHS**: Sorry mate, yes, I fully expect him to be. I'm not sure where he's at. I might just ping him on Teams.

**MR GRIFFITHS**: I'll send him a text message as well just to cover all bases.

**MR BUSH**: He's just sent us an email. He's having trouble logging in with Zoom. While we're waiting for Mark, Neal, we might kick off, if you like, if …

**MR MENZIES**: All right, yes, and Ron, as you know, I have a formal statement to read before we get into a discussion, so we might as well tick through that one.

So, guys, just so you all know what's going on. I'll read a formal statement and then at that point we'll go over to you guys for your presentation, and we'll have a more open backwards and forwards discussion, so everyone's free to join into that discussion.

Okay. So, my formal statement. Before we 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 today, and I pay my respects to their Elders past and present and extend that respect to the entire Aboriginal and Torres Strait Island community.

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 this matter and will form one of several sources of information upon which the Commission will base its determination.

It's important for 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.

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

Okay, so now we can begin.

**MR BUSH**: Would you want us to just introduce …

**MR MENZIES**: I think introduce your team first, Ron, and then to your presentation would be great.

**MR BUSH**: Well, Ron Bush from Centennial Coal. I'm the General Manager of Development and Approvals. There's also Pete Corbett, who is General Manager of Technical from Centennial. And Mick Nadalin who is Senior Project Manager that looks after a lot of the water treatment issues. I'll hand over to Mark Frewin from Energy Australia to introduce the Energy Australia team.

**MR MARK FREWIN**: Yes, thanks, Ron. So, Mark Frewin, Energy Australia, I look after coal supply for Mount Piper and their customer representative on the Water Treatment Plant. And my colleague, Peter Griffiths is also joining today, who is the Operations Manager at Mount Piper.

**MR BUSH**: With those introductions out of the way, we've got a presentation that we'd like to walk you through. So, I'll just share the screen. So, everyone can see that?

**MR MENZIES**: Yes, I can see that.

**MR BUSH**: Right-o. So, Mod 11, the Springvale Water Treatment Plant, so this is the IPC Applicant's Meeting. So, it's a short presentation, 10 slides, but it essentially goes through the items that were on the agenda, so hopefully that will answer a lot of the items that were identified on the agenda.

So, the Modification objectives. So, Springvale Water Treatment Plant is a mine water processing facility that processes mine water from the Springvale Mine and also the Angus Place Colliery for beneficial reuse by the Mount Piper Power Station. So, the Springvale Water Treatment Plant consent provides for the transfer and treatment up to 42 megalitres a day of mine water and transfer of treated water to Thompsons Creek Reservoir via the Coxs River Water Supply Pipeline.

The Springvale Water Treatment Plant relies on operations at Mount Piper Power Station to consume water for its cooling needs and also to dispose of brine generated by the plant by using it to dampen ash produced by the power station. Under normal operating conditions at Mount Piper Power Station, water consumption and brine production can be balanced with ash production.

So, during Mount Piper Power Station's production sort of periods, they have outages. And during these outage periods, water usage and ash production is significantly reduced, resulting in an excess of brine and limiting the ability of the water treatment plant to operate at its full capacity. The Springvale Mine, however, requires ongoing dewatering to ensure continued extraction of coal for

supply to Mount Piper Power Station. Recent increases in water make at Springvale Mine have reduced the capacity of underground storages available within the mine water management system.

A major outage is scheduled at Mount Piper Power Station commencing the 1st of April 2025 and is forecast to allow for 54 days, during which this time the ability for the Springvale Water Treatment Plant to process mine water will be limited. To reduce/avoid flooding of mine workings, Springvale Coal has submitted Modification 11 seeking approval to transfer a blend of treated and partially treated mine water to Thompsons Creek Reservoir during the upcoming April/May outage period.

Thompsons Creek Reservoir forms part of the Coxs River Water Supply System that supplies water to Mount Piper Power Station and the reservoir is considered and off-stream storage and has a small catchment of less than 10 kilometres squared. Thompsons Creek Reservoir is also a declared dam under the Dam Safety Act. Energy Australia manages water levels in the dam between a low and high operating level. And water levels are managed through a combination of controlling the volume of inflows from the water treatment plant, transfers from Lake Lyell and daily environmental releases from Thompsons Creek Reservoir and, where required, from time to time, emergency discharges.

So, an overview of Modification 11. So, again, to avoid flooding of mine workings at Springvale Mine, Springvale submitted Mod 11 seeking approval to transfer a blend of treated and partially treated mine water to Thompsons Creek Reservoir during the plant outage at Mount Piper Power Station, commencing in April 2025.

The water transfers would occur under the following conditions. Firstly, up to 24 megalitres a day of partially treated, that is filtered water, with indicative EC range of up to 1,200 micro siemens, or up to 42 megalitres a day of blended water with an indicated range between 600 and 900 micro siemens, consisting of a mix of fully treated water and partially treated filter water.

Water transfers are proposed to occur for the duration of the upcoming 54-day outage period, as well as a buffer period of up to 14 days prior and 7 days following the outage period.

The following controls are proposed to minimise the impacts of the proposed water transfers. Water quality in Thompsons Creek Reservoir does not exceed 600 micro siemens. Water levels in Thompsons Creek Reservoir would be maintained not to exceed the high operating level. And environmental releases from the reservoir would be limited to the minimum daily volume required under Energy Australia's water access licence, being 0.3 megalitres a day between May and August and 0.8 megalitres a day between September and April for the duration of any transfers.

So, the timing and duration. So, as I said, it's starting in April and will go to sort of May 2025. So, water transfers are proposed to occur during the duration of the

54-day outage period, as well as a buffer period of up to 14 days prior and 7 days following the outage period.

Water quality. So, the upper Coxs River catchment has been exposed to impacts from mining and other industrial activities for an extended period of time. Historical mining activities have included the direct discharge of mine water into the surface water environment. Given this, the water quality within the catchment has been historically poor, with elevated salinity reported across the catchment.

Water quality in the Thompsons Creek Reservoir and downstream catchment is above the ANZECC Guidelines for Fresh and Marine Water Quality 2018 default trigger levels for upland rivers of 350 micro siemens.

The commissioning of the water treatment plant in 2019 has resulted in a material improvement in the catchment water quality, by removing a significant discharge of untreated mine water from Springvale Mine an enabling Mount Piper Power Station to reuse up to 42 megalitres a day of treated mine water in place of freshwater from the Coxs River catchment.

The water quality within Thompsons Creek Reservoir is generally better and less saline than the downstream catchment water quality. In the 12 months to October 2024, the 95$^{th}$ percentile EC concentration in Thompsons Creek Reservoir was 526 micro siemens, while the 95$^{th}$ percentile EC concentration at the nearest Coxs River downstream monitoring point (WX9) was 879 micro siemens for the same period. Water quality further improves downstream at Lake Lyell where the 95$^{th}$ percentile concentration at the 12 months to October [2025 00:14:28] was 354 micro siemens.

So, this plan just shows those levels. So, Thompsons Creek Reservoir EC of 25 over the last 12 months from October last year. And then downstream of that, at that monitoring point (at WX9), EC was 879. And then further downstream past Lake Lyell is 354.

So, impacts on Sydney's drinking catchment. So, obviously, Sydney drinking catchment is governed by the Biodiversity and Conservation SEPP, and the consent authority cannot grant consent to carry out development in a drinking water catchment unless it would have a neutral or beneficial effect on water quality, which is termed the "NorBE" test.

Now, while the NorBE test requirement doesn't strictly apply to planning modifications, it is a useful framework to review potential impacts on downstream water quality. WaterNSW monitoring of salinity levels in the upper Coxs River has shown a declining trend in EC since the commissioning of the water treatment plant in 2019.

The proposed short-term transfers of blended or partially treated waters would likely result in a temporary increase in salinity within Thompsons Creek Reservoir. However, it is noted that even with the Mod 11, salinity levels would

remain below those of the downstream catchment and are therefore unlikely to adversely affect water quality immediately downstream of the Coxs River or result in any significant adverse impact on the broader catchment.

The predicted temporary water quality impacts in Thompsons Creek Reservoir would not negate the significant improvements that have been made to water quality within the catchment since the commissioning of the Springvale Water Treatment Plant. And we conclude that Mod 11 is unlikely to adversely impact water quality.

Monitoring and management measures. The following controls are proposed to minimise the impacts of the proposed water transfers. So, water quality in Thompsons Creek Reservoir would be managed not to exceed 600 micro siemens. The water level in Thompsons Creek Reservoir would be managed not to exceed the high operating level which is required under the Dam Safety Act.

Environmental releases from the Thompsons Creek Reservoir would be limited to the maximum daily volume required under Energy Australia's water access licence, being 0.3 megalitres a day during May and August, and 0.8 megalitres per day between September and August for the duration of the transfers.

Compliance and enforcement. So, the proposed condition 6D of the conditions of consent provides for the following notifications and compliance requirements that would be enforceable under the Modification. So, the proposed condition 6D states that:

"The Applicant must undertake transfers of blended water or partially treated water under condition 6B in accordance with the following conditions:

- The Applicant must notify the EPA and WaterNSW prior to commencing the transfer of blended water or partially treated mine water under condition 6B.
- The Applicant must notify the EPA and WaterNSW as soon as practical after the Applicant becomes aware if water quality in Thompsons Creek Reservoir exceeds 550 micro siemens.
- And the Applicant must immediately cease the transfer of blended water or partially treated water if the monitoring indicates there is a risk of exceeding 600 micro siemens.
- During the period of blended or partially treated water under condition 6B, daily environmental releases from Thompsons Creek Reservoir would be limited to the minimum volume required under the water access licence of 0.8 megalitres a day between September and April, and 0.3 megalitres a day between May and August."

So, that's that.

Alternative water management strategies. So, there's no currently approved alternative option available for handling of surface mine waters during the Mount

Piper Power Station outage when Mount Piper Power Station is not generating power and producing ash.

So, there was a range of alternatives considered as part of the Mod 11 assessment and the response to submissions, which included the following. Extension of time to the existing 6A condition, which wasn't favourable because the previous condition was approved for filtered water but is not suitable as it does not provide the volume required during the outage period or the water quality for the transfer to Thompsons Creek Reservoir.

Cease dewatering of Angus Place Colliery and allow extensive flooding of the underground workings. So, this would result in storage of approximately 400 megalitres that would represent a significant underground flooding and loss of storage inventory. Additionally, up to 200 megalitres would need to be stored at Springvale Mine. This option is not suitable as it increases the risk of future inundation of coal reserves at Springvale and Angus Place mines, which are planned for future fuel resources for Mount Piper Power Station.

Transfer of the surplus mine water to Angus Place Colliery and allow extensive flooding of the underground workings would result in storage of approximately 600 megalitres that would represent a significant underground flooding and loss of storage inventory. This option is not a suitable option as it increases the risk of future inundation of coal reserves and which are planned for future fuel resources for Mount Piper Power Station.

Another option could be to transfer the surface mine water via the East Wolgan Swamp. So, this option would see discharge of mine water into Narrow Swamp, which is an EEC, and then ultimately into the Wolgan River which is part of the greater Blue Mountains World Heritage Area. This option is not suitable as an LDP that previously existed before the water treatment plant was commissioned, has been revoked and removed from the Springvale Mine EPL.

Transfer of the surplus mine water to the upper Turon catchment within the Murray-Darling catchment. This has potential for transfer of up to 30 megalitres a day. This water management concept has not yet been fully designed, assessed or constructed, making this option not feasible in the timeframe under the consideration for Mod 11 in the April 2025 outage period.

Temporary storage of solid and/or liquid brine waste at Mount Piper Power Station. Mount Piper Power Station already actively manages pond levels to allow storage and utilisation during outage periods. Additionally, the storage volumes available are not sufficient to accommodate the April 2025 outage period.

Lower the water levels in Thompsons Creek Reservoir such that there's no discharge from Thompsons Creek Reservoir would be required in relation to outages. This option is not suitable because it's not feasible to change the licence, Thompsons Creek Reservoir repair and release requirements in the timeframe available, and results in a negative impact on the downstream riparian

environment if the riparian release contributions from Thompsons Creek Reservoir were to cease.

So, that basically concludes the presentation. So, I'll hand it back to you, Neal.

**MR MENZIES**: Thanks, Ron. Thanks for picking up on the various points that we'd flagged as being of interest to us. Sarah and I probably have a number of questions both ones from our reading but also things that have arisen there in your presentation.

My starting question is in relation to one of the constraints we have. So, the constraint being that a development consent cannot be modified unless the consent authority is satisfied that the modified proposal is substantially the same as the development for which the consent was originally granted.

Now, if I wind back to the original consent, the proposal was one of taking mine water, cleaning it up and using it to supplement water being taken from the catchment to supply the power station. So, essentially, a zero release of mine water into the mine catchment. Now, I struggle to see this modification as consistent with that zero release. Thompsons Creek Reservoir's been releasing around 10 megalitres per day on average for a couple of years. So, that's my first struggle, Ron. How do I see this in the context of the original consent?

**MR BUSH**: Yes, so in the Mod Report, there's a section on how we've addressed substantially same development. So, yes, probably where there's a lot of case law on substantially same development and it essentially gets to the qualitative elements of the quantitative elements. So, that assessment of whether it meets the substantially same development was provided in the Modification Report.

In submitting the Mod Report to the Department of Planning, they've got to be comfortable that it meets that substantially same development criteria, which they have been, allowing it to go through the process. But the conclusion of that assessment we made, and I'm pretty sure there's a table in there that goes through the qualitative and quantitative elements, concludes that it does meet the criteria built up through case law for substantially same development.

So, I'm happy to take further discussion on notice if you wanted additional input on that.

**MR MENZIES**: Yes. Well, Ron, just to sort of continue to expose my thinking, as it were. So, the riparian release rates that were set, the two lower ones look to me to have been the way that the basal flow in the stream was viewed. So, 0.8 and 0.3 is what you might expect to see in the stream. And then the maximum flowrate was probably set thinking about what is the biggest storm we're likely to see here. So, 18 megalitres is 180 millimetres of rainfall.

So, the current pattern of 10 megalitres per day is literally 100 millimetres of rainfall in that 10-square kilometre catchment every day of the year. And I'm

struggling with that as consistent with the original thinking of being able to deal with a big storm.

**MR BUSH**: Yes, so there's a bit of a disjunct there with … The Springvale Water Treatment Plant consent doesn't regulate the Thompsons Creek Reservoir in any shape or form, that's fully with Energy Australia. So, as you're probably aware, the consent provided for 42 megalitres a day can be utilised by Mount Piper Power Station for beneficial reuse, and any surplus water could be stored in Thompsons Creek Reservoir. So, that's the extent of this consent.

What happens with riparian releases is fully controlled by Energy Australia and it's not governed by the water treatment plan consent.

**MR MENZIES**: Yes, I accept that and yet last Friday we visited the site and saw 18 megalitres a day flying out of Thompsons Creek Reservoir to prepare it to receive the water that's going to come across, if we approve this consent. And that will bring Thompsons Creek up to very full. So, there's a logical connect here even if there isn't a consent connect.

**MR BUSH**: Yes, I can take it on notice, but I can only talk through what the water treatment plant consent controls …

**MR MENZIES**: Okay.

**MR BUSH**: … and what we're attempting to modify.

**MR MENZIES**: And look, just one more on that one and it's in the same vein, so Ron, I'm expecting you to take it on notice too. But I also struggle with the argument that this is consistent with the neutral or beneficial effect. The argument that we're presented with is that the water quality in the reservoir, which you're not saying you're going to release, but you are going to release it, that it will be of a quality comparable to or better than the stream downstream from you.

Various of the public submissions that we've got note that the water quality upstream is much better, maybe 30 micro siemens, maybe 50, we don't have that well referenced, but it's common to see 30 to a couple of hundred in upstream, so that seems reasonable.

I do accept that the water quality downstream is impacted by historical mining. But if I move to thinking about this in mass balance terms, it's not just the same quality water, it's another volume of water containing another mass of salt. So, it isn't neutral, there's additional salt being added to the catchment, and a substantial amount, a substantial amount at 10 megalitres a day, even more if the volumes are increased to cope with the addition.

So, once again I expect you to take that on notice, but it is a thought of concern for us how we align that to the neutral or beneficial effect.

Okay. Let me move onto something else entirely.

**MR BUSH**: Just before you get off the neutral or beneficial effect. We do note that the NorBE test is normally applied to planning applications, not particular to mods. So, we've used it as a reference guideline, but yes, the Department of Planning in their Assessment Report also note that it doesn't necessarily apply to modifications.

**MR MENZIES**: Yes, absolutely. Look, let's – from our discussions on site, and thanks for hosting us, that was really great to visit the site and understand what was going on. One of the things that I think I understood better from our discussions was the constraint that the brine disposal represents. That makes a whole lot of other things hard.

The options for brine disposal. Ron, I think I was told there's 300 – yes, 300,000 litres a day of brine produced. Is that approximately correct?

**MR BUSH**: I'll defer to Mark. I'm not really the …

**MR FREWIN**: Yes, that's probably getting into my area, Ron. So, yes, look, the water treatment plant produces up to around 600 megalitres a day, about 330 of that is turned into salt in the crystalliser and the residual is transferred to the brine waste ponds at Mount Piper. And that varies, the residual, depending on operations and what the water the quality is coming in, but it can be up to 300,000 kilolitres a day, or even slightly more. And that water is then blended with ash and deposited on the repository.

**MR MENZIES**: Yes. So, 300,000 litres a day is 10 semi-trailers full.

**MR FREWIN**: Hmm.

**MR MENZIES**: Can you get a fleet of semi-trailers and truck it somewhere?

**MR FREWIN**: Probably not without further consents, I suspect. I don't think we're consented to take it off site.

**MR MENZIES**: Would that be a better consent distinct from this one?

**MR FREWIN**: Well, I'm not sure where it could take it either. But yes, I mean, my … Yes, that hasn't been contemplated, and I don't know where it would be sent. We have in the past looked at could we truck some down to an ocean out for release in these sorts of conditions, but that hasn't been successful because I think the planning requirements of getting approval to release it into the ocean and not something that any of those operators are prepared to contemplate.

**MR MENZIES**: Okay.

**MR BUSH**: Yes, I've worked at numerous coal mines, and typically the southern

coalfields. RO plants, brine disposal to the ocean, even in the southern coalfields sites is extremely challenging from a regulatory approval point of view, both from the EPA and the Department of Planning and also the maritime side of environment. So, it sounds great but in reality it's probably no less challenging than what we're going through now.

**MR MENZIES**: Okay. So, let's test another one. Last time I visited, you had a large, beautifully constructed pond to take the water treatment residuals. And it looked to me to have capacity to store an enormous volume of whatever you wanted to put in it. Was that considered as a potential brine storage during your outage?

**MR FREWIN**: Look, the residual pond is actually not that large. I think it's in the order of maybe 7 megalitres, something like that. In fact, our largest pond on site is the mine water buffer pond which is just over a hundred megalitres. And we've attempted to bring the levels down on that to provide some flexibility through the outage.

But as Ron pointed out in some of the other options that were reviewed, there's in the order of 600 megalitres of water that will need to be dealt with, mine water. So, that, we couldn't, you know, we don't have capacity to store that much mine water anywhere on site.

**MR MENZIES**: Mark, I was thinking about the brine.

**MR FREWIN**: Ah, the brine. So, yes, and we have our own brine ponds which we are seeking to bring down to the minimum level. In fact we've successfully brought down the levels in those quite a bit over recent months.

Now, what we're doing with those is we're, even to produce just the solids salt, there is a liquid residual that comes out; I think it's around 40 kilolitres a day, potentially up to 80, depending on what operations are happening on the water treatment plant. So, we do need some capacity to store that, and that's what we'll be looking to use those ponds for.

Also, there's some, just the nature of this particular outage, both the power station units are out of service and we're actually doing work on the cooling towers. So, we've got to drain all the water out of the power station as well, which is quite a lot of work; I think it's around 50 megalitres. And so a lot of our on-site pondage is getting used for storing that material, which also can't be discharged anywhere. And in order to process that, we need to put that through our brine concentrator units at the power station too, and they produce salt for the salt ponds as well.

We have looked at could we store it all in those salt ponds, and the projections were that we couldn't, and that's why we've sought this consent. I don't know if Peter Griffiths – are you online there?

**MR MENZIES**: Mark, we just wanted to make sure that we're talking about the

same ponds. I'm concerned that you're talking about the ponds at the power station.

**MR FREWIN**: Yes.

**MR MENZIES**: The pond that I was referring to, I think it's at Western Coal Services where the water treatment residuals from the …

**MR FREWIN**: Oh, are you talking about the reject emplacement area at the Western Coal Services?

**MR MENZIES**: Yes.

**MR FREWIN**: Ah, yes. Well, look, that hasn't been contemplated, I'd agree. But the reason for that would be that the EPA is very concerned about even the volume of residual waste going to that pond. Because of the – and perhaps Ron's best to comment on that – but I think they have concerns that that liquid in that pond may find itself into the environment as well. But perhaps I'll refer to Ron to talk about the reject emplacement area.

**MR BUSH**: Yes, as Mark said, the EPA has some concerns about the water management in the Western Coal Services site and that's resulted in a pollution reduction program that we're currently working through with the EPA.

So, yes, the potential water that flows out of the REA from the small amount that goes over there for the residuals, they're concerned about it entering the groundwater system. So, the volume that we're talking about here would, you know, is significantly more. So, I couldn't see the EPA entertaining a solution that would involve the Western Coal Services site with all the current discussions and things that are happening there at the moment.

**MR MENZIES**: Well, once again the logic sequence here would be the risk of it entering the environment if we pump it there, compared to direct injection to the environment through Thompsons Creek Reservoir.

**MR FREWIN**: I think the … Just on the Thompsons Creek Reservoir point. I mean, I think we're seeing that the likely EC change on Thompsons Creek is in the order of 10 micro siemens or something over the course of this process. Now, I think for the purposes of these studies, it was, what, 580, I think you said, Ron, from those studies. But since then, the concentration in Thompsons Creek has actually reduced a bit, so it's now sitting under 500. So, I think our thinking is that with the dilution that you get from …

We're maximising the desalination capacity that we've got within the salt envelope that we've got to work with, and using the dilution in Thompsons Creek, it really will be quite a negligible change in EC for the riparian releases. That's kind of the philosophy that we've run with here.

**MR MENZIES**: Once again, that's thinking about it as concentration rather than mass. So, thought about as mass, it's exactly the same amount of salt, whether you risk it leaking into the aquifer or directly put it into the stream. It's the same mass of salt. So, I'm asking it as a concentration change is sort of misleading.

**MR FREWIN**: Although I think the other point to make though is that a lot of that will then be subsequently reused by the power station when it resumes operation and draws some water from Thompsons Creek. That there are times that it does need more than the water treatment plant can produce, and it draws that from Thompsons Creek.

So, Thompsons Creek in the philosophy of the whole project is a storage, it's not really a drain point in terms of the project concept.

**MR MENZIES**: And Mark, you're bringing me back to my original point about the original development consent was exactly that, but for the last two years we've been draining 10 megalitres a day on average from Thompsons Creek. So, how can we reconcile development consent?

**MR FREWIN**: I think the … My recollection of the original development consent was that it does actually contemplate that there could be times when Mount Piper is unable to take all of the water. And it has that facility in there that talks about the ability to get [Secretary 00:43:41] approval to do emergency releases from Thompsons Creek, which is to facilitate safety of the dam wall.

But I think it was clearly contemplated that the dam was going to be operated in accordance with its licensing, which included the riparian release in the original approval. Albeit that releases over and above riparian needed Secretary approval. So, I just query whether … I think you were concerned that it wasn't contemplated at all, where I think if you read that consent, I think it was.

**MR MENZIES**: Okay. I'm tending to dominate with my questions. Sarah, I'm sure you have things that you would like to explore. And you need to hit the mute button, mate.

**MS DINNING**: Zoom tells you. It actually says, "you are muted, unmute". Thank you. Thanks, Neal. And thanks. And look, while we're on development consent, I just had a question and it relates to one of the slides that you had about the alternative – sorry, the alternative strategies. And there was something in there that said, it was an original …

Yes, the alternative water management strategies and there's no current approval. I understand that. Previous approval was for filtered water and does not provide the volume required during this outage period. But my understanding – and please correct me if I'm wrong – is that that approval for filtered water or partially treated, I know the terms are used interchangeably, was actually part of an interim water management strategy that expired in October 2023. It's the one that has kept being rolled over. And so, I mean, it doesn't have effect at present, does it?

**MR BUSH**: That's correct. So, there was a modification that was submitted early last year, that was ultimately withdrawn on the advice of the Department of Planning. And there's a future sort of mod that we're looking at that would address some of the issues that were raised from there, but it's separate to Mod 11.

**MS DINNING**: Yes. So, but just, if you don't mind, so the idea being that it's now more about partially treating mine water than the fully treated water from the plant. Is that something that the intention is to become a permanent definition?

Because, I mean, I'm interested in the ratios of how it's, you know, how much is in this application, is there a greater amount being sought for a lower quality water with higher salt, with higher micro siemens amount?

**MR FREWIN**: Could I maybe try and address that consent, Ron?

**MR BUSH**: Yes, that's okay, yes.

**MS DINNING**: That's fine.

**MR FREWIN**: So, look, that historic arrangement which was originally put in during the commissioning stage of the plant, it is for 24 megalitres of filtered water. So, it's water that has been filtered, so the turbidity's been taken out but there's no desalination at all and it's 24 megalitres of that.

Now, so that would – and I think the reason that was listed as an option was that that was a question that some regulators had, I think, in their response to submission, so that's why it's been addressed there.

I think what we're proposing here is a preferable arrangement whereby we're actually using as much desalination as we can and then blending that with the filtered water to get this blended water product. So, the blended water, the filtered water product has got probably a 1,200 EC, thereabouts, and this blended product is going to be somewhere around the 800, I don't know the exact number, but you may have that, Ron, from the studies.

So, what we're proposing here is it's a higher volume but it's a lower concentration because we're blending some 18 megalitres of desalinated water with about 24 of the filtered water under this proposal, so.

**MS DINNING**: Yes. Thank you. And we've got that information, so thank you.

**MR FREWIN**: Yes.

**MS DINNING**: I suppose, just to close off the point is that this idea that you've got, the development consent gives the approval of so much of partially treated mine water, has expired.

**MR FREWIN**: It has, yes. No, we totally agree and it's no longer in force.

**MS DINNING**: Yes.

**MR FREWIN**: I think it was suggested by some commentators as a possible option that we perhaps should have contemplated. And so, I guess, in that list of other options, we've just tried to address that given it was raised by some other parties.

**MS DINNING**: Yes.

**MR FREWIN**: Yes.

**MS DINNING**: Okay. And look, if … Thanks for that. If I could just ask now, and I think you were there before, Neal, and others of you. But just in terms of those alternative, and I haven't got the right word here, the alternative approaches considered. This is a very big outage, as you've been saying. You're not contemplating that you'll have – and I call them turbines, both happening at once in future, and there's a lot happening in there.

It just seems – what's the plan B or the plan C? I mean, you guys run all these huge assets. There's a lot of planning here, so …

**MR FREWIN**: Well, the … I mean, this is a really … We've never had an outage this big at Mount Piper. This is a once-in-30-year type outage. And so we're … and there has been a lot of planning going into it. I guess the option if this is not approved, then we'll be unable to fully take as much mine water and that mine water will have to be stored in the mines, which will bring forward the time at which the mines may flood if there's further problems in the future.

So, there is an amount of storage in the mines, but really a lot of that has been exhausted over recent years with various other water treatment problems we've had. And it is now getting to the stage that there's really not that much left and so we're trying to, I guess, protect that coal resource which is the resource to see Mount Piper out over the next few years until the new power system of renewables etc. can be built.

And so, I think our view is that the best overall solution for the community and the environment is to protect that resource, see out the final years of Mount Piper until that new energy system is put in place and operating. And that's far better than other options of having to go and build new coal mines or other things like that, so.

**MS DINNING**: Yes. Okay. I mean, Neal, did you want to add to that question or …? I mean, I can just make the point, I just think that for, it is, as you said, it's a once-in-30-years, it is a very significant outage. You've got a very constrained environment, it's very complex. And I suppose I'm just saying for there to be the one option and really nothing else, it seems slightly incompatible with the

significance of the outage.

**MR FREWIN**: Hmm. Well …

**MS DINNING**: Look, it's a comment.

**MR FREWIN**: I guess, yes, look, we've listed a whole lot of other options that have been considered and there's not a lot of great options here, unfortunately.

**MS DINNING**: Yes.

**MR MENZIES**: There's a complex, a really complex system that you guys are dealing with, so.

**MS DINNING**: Yes.

**MR MENZIES**: Yes, and Sarah and I are coming in from the outside trying to tease this apart. Mark and Ron, one last question. Water is a problem and water is an asset in our country, it's a problem for you guys in that you've just got too much of it to deal with.

What is the longer-term plan? Given the power station has a few good years left in it yet and the coal supply right next door is obviously where you want to keep feeding the power station from. How do you deal with the water for the next, what have you got, a decade of operation of the power station – longer? I don't know the answers to these questions.

Ron, there's a couple of questions in there. How long is the power station likely to go for, and what are you going to do with the water between now and then?

**MR BUSH**: Mark's the power station …

**MR MENZIES**: Mark, it's yours.

**MR FREWIN**: Look, I'll have a go at that, Neal. Look, how long is the power station going to go? It's really a function of the rollout of the renewable assets and storage assets and Snowy 2.0 and all of that stuff. There's trillions of dollars of investment needed to replace the old power system with the new power system, and it's likely to be well into the 2030s.

Currently, we've said that Mount Piper will be open till 2039 at a maximum. But I think we've acknowledged in our Climate Action Plan at Energy Australia that we're not just putting a hard date on it, because it's highly uncertain. But we expect it to be probably in that second half of the 2030s at some point. When the new system is in place, that will probably be the time that Mount Piper is no longer required and will look to phase out.

But if things go well and the renewables all come in sooner and the storage assets

come in sooner, then it can be brought forward. But currently, the asset's being managed towards 2039, and I guess there's flexibility to bring that forward if the other arrangements come in earlier than expected.

Now, it is worth noting, I guess, in that picture that Mount Piper is the youngest of the New South Wales coal generators. And so, we think logically it should be the last one to close, and that's why it's probably in the back end there. There's been a lot of publicity about others that are looking to close much earlier. And we see it as a phased-out approach over the next decade really, as new assets come in, old assets can be retired. So, that's that aspect.

I guess on the water treatment side, I mean, the existing water treatment project, I think, has been highly successful in managing water in the system since it came in, in 2020. And as Ron said in his presentation, the water quality in the Coxs River catchment there has improved a lot since the days when the mine was releasing it directly into the system. I think from that perspective, that the water project's been successful, and I think it can continue to operate as it has been into the future, probably to meet the life of the power station and/or the coal mines.

So, I think that's probably the primary source now. If the mine dewatering requirement continues to grow, as it does grow slowly as you open up more and more tunnels underground, there may become a time when further capacity is required.

And I guess there's the aspect that as the renewable transition continues, we expect that logically over time, the capacity factor of Mount Piper will reduce as either utilisation of the power station, because if things are going well and we'll get more and more power supplied by renewables and less and less from coal, until the point the coal's no longer needed. So you'd expect that the corollary of that is that over the longer term, the amount of ash generated at Mount Piper will start to reduce and I guess that's the other factor that might come in and constrain the ability of the current arrangement to continue.

So, we are conscious of that. I guess we're looking at options. Ron mentioned there is the potential option of looking at other water users, and I think you flagged it, Neal, there that there are certainly parts of New South Wales to the west that are pretty short of water.

**MR MENZIES**: Yes.

**MR FREWIN**: We've got a bit too much water here for the moment, and that's certainly the types of option that we'd like to see utilised going forward. And if we can find ways to do that, then I think that'll be a win-win for us in terms of managing the water, for other users in terms of getting the water that the need. And I think that's where we'd like to go with this over the longer term.

But there's a lot of work to be done there. There's a lot of questions that need to be answered on water quality, germ morphology, etc., etc.

**MR MENZIES**: Yes.

**MR FREWIN**: So, those are all the works that need to be done and are intended to be done over the next period to try and identify the right opportunity there.

You probably heard in the past of the Regis Mining opportunity out there that we were lined up to supply some water to. But unfortunately, that is currently on hold as they work through some federal issues.

**MR MENZIES**: It's an interesting option, isn't it, finding industries for whom a little bit of salt in the water isn't a problem. It's an ideal solution to the problem.

**MR FREWIN**: Yes.

**MR MENZIES**: But it changes from being a problem to being an asset.

**MR FREWIN**: Indeed, indeed, and that's certainly what I'd like to see.

**MR BUSH**: Kind of like the Regis, that none of these are short-term solutions; they all have a long duration and gestation period before they can come to reality.

**MR FREWIN**: Certainly. So, not really in the timeframe for this particular outage, but certainly of interest for the longer-term future of the asset, which is where I think you were going, Neal.

**MR MENZIES**: Yes. Sarah, any last questions?

**MS DINNING**: No, thank you, Neal. Thank you.

**MR MENZIES**: Okay. We're just a little bit over time but given the extensive discussion we've had, we've done extremely well. So, it just remains for me to thank you, and I do thank you, the answers that you've given us have been very forthright, thoughtful, deep, and you've given us an insight into the complexity of the problem that you face, and handled with grace some of the probably poorly thought-through things that we were backwards and forwards on. So, thank you very much for your input. And enjoy the rest of your afternoon. Because I'm in Queensland, I have more of it to enjoy than you guys do.

**MS DINNING**: Thank you, Neal. And thank you, everyone. Thank you.

[All say thank you]

**>THE MEETING CONCLUDED**