



TRANSCRIPT OF MEETING

RE: WESTERN COAL SERVICES MOD 6 - RESIDUALS TRANSFER INCREASE (SSD-5579-MOD-6)

SPRINGVALE WATER TREATMENT PLANT MOD 9 - EXTEND INTERIM WATER MANAGEMENT STRATEGY TIMEFRAME (SSD-7592-MOD-9)

SPRINGVALE WATER TREATMENT PLANT MOD 10 - RESIDUALS TRANSFER INCREASE (SSD-7592-MOD-10)

DEPARTMENT MEETING

PANEL: PROF NEAL MENZIES AM (CHAIR)
PROF ALICE CLARK
PROF SNOW BARLOW

OFFICE OF THE IPC: STEVE BARRY
CALLUM FIRTH

DPHI REPRESENTATIVES: CLAY PRESHAW
JESSIE EVANS
GABRIELLE ALLAN
EMILY PEMBERTON

LOCATION: ZOOM VIDEO CONFERENCE

DATE: 1:45PM – 2:45PM
FRIDAY, 2ND FEBURARY 2024

<THE MEETING COMMENCED

PROFESSOR NEAL MENZIES: Okay. Colleagues, welcome. Clay, very nice to see you with us. You were a tentative on my list, so thanks for making the time to join us.

MR CLAY PRESHAW: No worries, pleasure to be here.

PROFESSOR MENZIES: Okay, so, I have a formal statement to read just to set the guidelines of our discussion. I'll get in and do that. And then, you know, it'll be a lot more, interactive from that point onwards if I can find the appropriate screen on my computer. All right. So I'd like to start by acknowledging that I'm speaking to you from the lands of the Turrbal and Jagera peoples here in the Brisbane River catchment. 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. We're here to discuss Western Coal services Mod 6 - the residual transfer increase. Springvale Water Treatment Plant Mod 9 - interim to extend the interim water management strategy time frame. And Springvale Water Treatment Plant Mod 10 - residual transfers increase. And these are all currently before the Commission for determination. So my name is Neal Menzies. I'm the chair of this Commission panel. And I'm joined by my fellow Commissioners Professors Alice Clark and Snow Barlow. We're also joined by Steve Barry and Callum Firth from the office of the Independent Planning Commission. In the interest of openness and transparency and to ensure 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.

PROFESSOR MENZIES: This meeting is one part of the Commission's consideration of this matter and will form one of several sources of information on which the Commission will base its determination. It's important for the commissioners to ask questions and attendees, of attendees and to clarify issues wherever 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 will then put, up on our website. Finally, I request that 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. And that way it ensures accuracy of the transcript. Okay, so let's now begin. I see that you guys have a presentation to make to us. So Calum, do you want to bring that up on screen? Callum's been doing this very effectively for us in our other meetings. So it's not that we don't trust you, but we don't trust you. We've had earlier instances where we've spent five minutes waiting for it to come up and that's okay. Callum's a master. Here we go. So whoever's presenting. Yeah. There you go.

MS JESSIE EVANS: That will be me. Thank you Chair. So good afternoon. My name is Jessie Evans, and I'm the Director of Energy and Resource Assessments at what is now the Department of Planning, Housing and Infrastructure. So I'd like to start by thanking the Commission for giving us the opportunity to brief you on these

modifications today. And I'm joined with by my colleagues today. I've got Clay Preshaw, who's the Executive Director of Energy Resources and Industry Assessments. Gabrielle Allen, who's a Team Leader within my team. Paulina Goldberg, who's a Senior Planning Officer within my team. And Emily Pemberton, who's a Planning Officer in in my team. So I just would like to start today by providing some context for these applications, noting that all three modifications do aim to improve, to provide additional capacity and contingency for the ongoing efficient operation of the Springvale Water Treatment Plant. For the rest of this presentation, I'm going to refer to the Springvale Water Treatment Plant as the treatment plant. The department understands that these modifications have been driven by a number of factors. So firstly, there has been a significant and unanticipated increase in mine water make at Springvale Mine over recent months, and this has led to more mine water needing to be pumped from the workings in order to be able to maintain a safe working environment. This additional water has placed additional pressure on the treatment plant, and the treatment plant itself has been operating at or near capacity in recent years. Secondly, Springvale has encountered difficult geological conditions that has resulted in the mine water being more turbid than usual and outside of the normal operating parameters of the treatment plant, so this has resulted in periods of non-operation or low flows due to challenges maintaining adequate filtration.

MS EVANS: So mining has recently paused at Springvale, and that's to enable a longwall changeover, which has in some ways temporarily alleviated the generation of turbid mine water. And the water now going through the treatment plant is back down to a level more within the parameters that the treatment plant can operate at. And finally, with this increase in water make and reduced treatment capacity, Centennial has exhausted its available water storages at Springvale and Angus Place mines, which provide contingency for when the treatment facility is not operating at its full capacity. So the above three factors have left Centennial with limited options for managing its excess mine water in the short term. I would note, however, that Centennial has advised the Department of a range of other measures that it's currently pursuing to improve capacity within its water management system, and that includes additional reverse osmosis treatment at Angus Place to increase storage capacity and relieve pressure on the treatment plant. However, a modification application for this is yet to be submitted, and it is also noted that these would be longer term solutions to an issue that currently requires action now. 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 in the catchment and in supporting the operation of Springvale Mine, which is the main supplier of coal to the Mount Piper Power station.

MS EVANS: So, firstly, to the issue of water quality, the commissioning of the treatment plant in 2019 dramatically reduced the volumes of saline mine water discharge to the catchment. The treated water produced by the plant is beneficially reused in the power station, with excess treated water discharged to the environment being of a higher quality than the background catchment water quality. Is anyone else getting the echo? Okay. It's gone. Okay. So in summary, the plant has made a

significant contribution to improving water quality outcomes for the catchment and for this reason alone, the ongoing efficient operation of the plant is in the public interest. Secondly, the treatment plant is an essential component of the water management system for Springvale Mine, enabling Centennial Coal to manage mine water inflows and continue supplying coal to Mount Piper power station. Springvale is the main supplier of coal to the power station, and that power station provides up to 15% of the state's electricity. Mount Piper is currently critical to the reliability of New South Wales energy supply, providing firm capacity during periods of high demand. There is also no commercially viable or approved alternative coal supply options currently available to replace Springvale Mine. So the New South Wales government's energy security advisers have advised that the current water management issues and water levels at Springvale Mine threaten medium term coal supply to Mount Piper and present an electricity reliability risk from winter 2024 onward. I would now just like to provide a brief outline of the engagement the Department has undertaken during its assessment, and the key issues raised by agencies and stakeholders in this process.

MS EVANS: I will then hand over to Gabby, who will provide an overview of the modifications and the key assessment issues and findings. So as you're probably aware, the department exhibited each of the modification applications for two weeks between September and November last year and notified each person who had made a submission on the original applications. Modification 9 of the treatment plant consent received four public submissions, three of which were in support and one objecting. The objection from Wilderness Australia was on the grounds of compliance with the Springvale Mine consent, water quality and water related biodiversity impacts. The residuals models, which include mod ten of the treatment Plant consent and Mod 6 of the Western Coal Services consent, received one public submission objecting to the modifications on the basis of the lawfulness of the modification planning pathway. The department also consulted extensively with key government agencies and public authorities, and in particular the EPA, the Environment Protection Authority, so all agencies supported Modification 9. However, the EPA recommended conditions requiring additional real time water quality monitoring in the Thompsons Creek Reservoir, managing the transfers to ensure that water quality in the reservoir remains below 650 EC, and requiring that Centennial notify the EPA when water quality exceeds 500 EC. These recommendations have been reflected in the recommended conditions put forward to the Commission. In relation to the residuals mods, the EPA water New South Wales and at the time, the department's water group raised concerns about the impact of increased residuals, transfers on the quality and quantity of discharges from the Western Coal Services site.

MS EVANS: The EPA recommended that Centennial consider alternative options for residuals management that would not contribute to existing poor quality discharges. In response, Centennial committed to limit the duration of increased residual transfers to 18 months to enable an alternative residual management system to be developed and implemented. The EPA did not accept this, and ultimately recommended conditions that limit the time frame of increased residuals transfers to

three months, after which alternative interim methods of treatment and disposal would be required to manage any increased residuals volumes. Water New South Wales and the then water Group also supported this approach. The department adopted the EPA's recommendation to limit the duration of increased residuals transfers to the 30th of April, 2024. As of a few hours ago, the department became aware that Centennial is now of the view that this modification in that time frame is not operationally viable for them. This is because they're currently undergoing a longwall changeover, at best case scenario, that longwall is expected to be ready to be operating at the end of March this year. Which means that the three months that we envisaged when this was sent to the commission would run out within a month of them changing over to the longwall and starting operation again. So I think this is a point that maybe we can discuss when we finish the presentation. I understand you've met with Centennial this morning and, we also had a briefing from them separately, with different people from Centennial this morning, and it's only just been brought to our attention.

MS EVANS: So I'd like to have a discussion a bit later. So I'll just move on to the matter of the lawfulness of the modification planning pathway for the residuals mods. The department is satisfied that a modification under section 4.5 51A is a lawful and appropriate pathway. The Department agrees with the response provided by Centennial in its submissions report that Centennial is entitled to apply for modifications to its development consents, and may do so via one or more applications. Similarly, the Department is satisfied that by splitting the modifications, Centennial has not avoided carrying out any environmental assessment for these modifications. The Department has also formed the view that, in the case of the Western Coal Services consent, the development and modified as modified would be substantially the same as the development for which the consent was originally granted, as the modified development would essentially or material have the same purpose. A similar view was clearly formed by the then-Planning Assessment Commission when approving Mod 1, which permitted residual waste transfers from the treatment plant. I note that the original treatment plant consent proposed residual waste transfers to Western Coal Services, and that the department is satisfied that a modification to temporarily increase the rate of these transfers would remain substantially the same development. I'm now going to hand over to Gabby to further talk you through the modifications and the key issues.

MS GABRIELLE ALLEN: Okay. Thanks, Jesse. Good afternoon everyone, my name is Gabrielle Allen. I'm a team leader in the energy and resource assessments team at the department. As mentioned by Jesse, I'll be providing an overview of the modifications, along with a summary of the key assessment issues and the department's findings. I'll firstly discuss Mod 9 to the treatment plant consent, which relates to the transfers of water to Thompsons Creek Reservoir. If you look at the first figure that's being shown here from the slide pack, it just shows the general arrangement of the location of Thompsons Creek Reservoir in relation to the treatment plant. Up next to the Mount Piper power station. The existing consent for the treatment plant permits the transfer of up to 5760 megalitres of filtered mine water to the Thompsons Creek Reservoir until October 2023, and at that date, less

than half of the total volume of filtered water had been transferred, so these transfers have historically provided Centennial with an alternative storage option when the treatment plant is not operating at full capacity. Mod 9 seeks to extend that time frame to transfer the remaining volume of filtered water to the reservoir through to
5 October 2026.

MS ALLEN: Importantly, the mod does not seek to increase the total volume, the rate or the quality of the water that's being transferred. The key assessment issue for this application has been the impact of filtered water on the water quality in
10 Thompsons Creek Reservoir and to the downstream catchment. The water quality impacts of transferring the total approved volume of filtered water have already been modelled, assessed and approved as part of previous modifications, three and four to the consent, so the assessment supporting this application has included a comparison of the previously modelled and approved water quality predictions, with the actual
15 observations within Thompsons Creek Reservoir following the commencement of those water transfers in 2019. So the results of this analysis indicate that EQ is the only parameter that has seen a statistically significant increase following transfers. Importantly though, the EQ values that have been observed within the reservoir remain less than the modelled values approved under the earlier modifications. And
20 so the department considers that the model predictions do remain valid.

PROFESSOR MENZIES: Could we? I think it'd be useful for us to ask questions and discuss things as we move through. Provided you're comfortable as a team to do that. Yeah. Okay. So I'm going to start with a first question about this. And I've been
25 asking everyone about the salt transfers. So you know, the language we're using to describe this modification is really transfer of water to Thompsons Creek Reservoir for storage. But actually, that's not what's happening. We're transferring water to Thompson's Creek and then releasing it. Not explicit in anything that's being said here, but the company tells us somewhere around 20 megalitres a day is discharged
30 from Thompson's Creek Reservoir. So we're really talking about transfer of water and salt to Thompson's Creek. And it's Thompson's Creek Reservoir, and then it's released. So we're concerned about the salt. We're not concerned about the water. We're concerned about the amount of salt and also the concentration of salt. So I agree that what we're being asked here is, you know, consistent with the previous
35 mods, but the limit of what the water quality was appeared to be set by the modelling of what it was going to become, rather than an environmental constraint that you might think would be reasonable, given that the water is going to be discharged, not stored, and brought back into the system. So we've been told that in the upper Coxs River catchment, water quality is somewhere around 30 micro-siemens per
40 centimetre. We're looking at an Anzac guideline of 350 for catchments of this type, but we're now saying, well, 500 and the company is asking for 700 and something. So I'm interested in how you thought about the environmental impacts of release, not just for this mod, but, you know, going back steps earlier when permissions were given for 500 in the reservoir and, you know, consequently release from the
45 reservoir.

MS ALLEN: Yeah.

MR PRESHAW: Yeah. So. Well, I'll let you go, Gabby first, but that's all right.

MS ALLEN: I'm happy for you to go, Clay.

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PROFESSOR MENZIES: And you know, this is not an examination, guys. It's a discussion.

MR PRESHAW: No, it's a tricky one. And perhaps, what we will need to do is come back to you with sort of a history of previous approvals. But that was actually what I was going to prompt, perhaps Gabby or Jessie to summarise. Because that might be useful in terms of understanding what's what's previously been allowed to occur on site and, and therefore what's what's already been approved in many respects.

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PROFESSOR MENZIES: That would be useful. And as I say, concentrating more on, you know, was there a consideration of the environmental impact? And how how did we get to 500? Being reasonable, as I say, because the company's now asking for 700. So we would really be, you know, interested in how in an environmental context, twice the Anzac guideline would be a reasonable thing to do.

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MR PRESHAW: Yeah. Look, maybe I'll start. But look, this is something that we may need to sort of take on notice and come back to you. But there's a there's a long history of pollution reduction at the various sites that Centennial run in the Western coalfield. So it was actually when I was at the Planning Assessment Commission back in 2014 that the Springvale mine was looking for an extension project and was at that time releasing fairly saline water into the Coxs River catchment. And it was probably at that time the Department of Planning was consulting closely with the EPA about what was the right number to get that salinity down from. Now, I can't remember off the top of my head exactly what the numbers were, but I think that I think the discharges were somewhere in the sort of 12 to 1300 range at that point or up to that range. And, regardless of what the Anzac guidelines say, EPA was advising the department about what is a reasonable number to try and get that down to. Now, at the time, there was, I think, a discussion, again we'll have to come back to you on this, that anywhere sort of in the 500 to 800 range, I think would be considered to be a huge improvement and would probably be an acceptable outcome in the catchment. And that that discussion actually involved, you know, consultation with the Sydney Catchment Authority, which is now Water New South Wales at the time. But as a result of the process of working through the extension project at the commission, I think essentially what happened was that we needed to go beyond just getting reductions in salinity. We actually need we were actually aiming to completely remove the discharge of saline water, I think this was at LDP nine over a period of time. But there's always been the release of other saline water at a different point in the, in the catchment, which is at LBP six. Am I getting the numbers right?

45

PROFESSOR MENZIES: I think it's become LDP one.

MR PRESHAW: LDP one.

PROFESSOR MENZIES: Yeah. What used to be LDP six.

5 **MR PRESHAW:** And I think it's fair to say similar to where we were in 2014, LDP
one is is the next, I guess, place that collectively government is trying to reduce
salinity again. Now, I the reason I say all that is to make the point that there has
always been saline water discharged into the catchment, and it's just sort of the
10 bigger picture is how are we going to get those numbers down? And there has been
significant improvements over time. But we're still, you know, there is still
essentially salinity occurring from the operations of Centennial in the Western
coalfield. So I think that that sort of goes to, well, what is the right number? Why is
500 or 700 acceptable? You know, it's it's really a matter of trying to get the
discharge of saline water down across the board in various locations.

15 **PROFESSOR MENZIES:** Clay, that's a that's a good answer and helpful. And look,
we are very sensitive to there being a problem here that we've got to fix in the short
term as well as, you know, an ongoing problem that that might have a different
solution. So I think that's right.

20 **MR PRESHAW:** And maybe just to sort of round out the point I'm making,
essentially what we're faced with right now with these two modifications and you'd
be aware there are other modifications in the assessment process at various stages.
This these particular modifications are essentially asking us to take one step
25 backwards, perhaps, but in order to allow us to take two steps forward or more in
later applications. This is, to be fair, I guess, a slight step backwards. But it's not
wildly outside the realms of what's already been occurring in a broader sense from
centennial's operations in the catchment. I guess that's the that's the general point I'm
trying to make here.

30 **PROFESSOR MENZIES:** And look, we probably should move on again. But,
Clay, you indicated that you guys might be able to provide us with a bit of an insight
into that historical decision making process. It, if you could, that would be useful.

35 **MR PRESHAW:** We're absolutely happy to take that on notice. And it's, as Jesse
mentioned, the playing field is slightly changed as of today. And I have I've already
had a quick chat with, my counterpart at the EPA, and we're, scheduled to have a
discussion later today or early Monday. So we'll talk to EPA about that as well and
come back to you with some more information.

40 **PROFESSOR MENZIES:** Okay. Gabby, I think we're back over to you.

MS ALLEN: Yep. No problem. And I guess the next point I was going to make is
loosely connected, but also, the conclusions, of the assessment that has been
45 prepared for these mods is that they're based on all the aquatic monitoring that's been
done within the Cocks River catchment, that there is no evidence of cumulative
impacts on a quality aquatic ecosystem health within the catchment. So, that being

said, the department considered that with the recommended conditions requiring Centennial to manage the transfers to ensure, water quality in the reservoir remains below 650 EC, and with the requirement for real time water quality monitoring, that the risks to adverse impacts on water quality and downstream aquatic ecosystems is reasonably low. I note also that the Department has undertaken an assessment of other environmental matters, including consideration of the reservoir capacity and impact on, Sydney drinking water catchment, which are all documented in our assessment report. So unless there's other questions on Mod 9, I am happy to move on to Mod 10, Mod 6, the residuals mods.

PROFESSOR MENZIES: Let me just check with my colleagues. Alice - anything at this point?

PROFESSOR ALICE CLARK: Nothing at this point thanks Neal.

PROFESSOR MENZIES: And Snow?

PROFESSOR SNOW BARLOW: I hope you don't mind us calling you Gabby. The last statement you made that you were satisfied that there has been no impact to date. On the impact of salinity in Coxs River on the aquatic life. Did that assessment include. You know, if we're being asked to approve something that will increase salinity in Cox's River. So do you know what is the danger level? You know, how close are we to a danger level on an impact on aquatic life. So in other words, just not looking back, but looking forward to what the impacts of this mod might be.

MS ALLEN: I would probably have to take that answer on notice a little. However, I guess it's also. Relevant to note that, you know, salinity within the Coxs River catchment has been declining, over the period that, these transfers have been happening. So, I guess. Yeah, I think it would be difficult. And I guess it's also, salinity within the catchment has reduced substantially since the raw mine water outflows were being pumped directly to the Coxs River. So I guess it's very difficult to answer that question with any certainty.

MS EVANS: Yeah, I would just add it would be difficult to give you a number as to the threshold as to what EC would start having an impact, but the overall picture is that salinity has been improving in those systems. And arguably the aquatic ecosystems are in a better place than they were prior to the treatment plan being commissioned.

PROFESSOR BARLOW: Okay thanks. We might return to this question later. Okay.

MR PRESHAW: I think some of what Gabby's about to present will give you a little sense of what the trends are as well, I'm not mistaken. So maybe if we move on now.

PROFESSOR BARLOW: Yeah, right. Okay. Let's keep going Gabby.

MS ALLEN: All right, Sure. So this, the second figure in that slide pack, Callum, shows, the location of the water treatment plant, the residuals pipeline and the reject emplacement area at Western Coal Services that is, outlined in yellow. Under the existing consents. And Tennille is permitted to transfer limited volumes of residuals, waste from the water treatment plant to Western Coal services reject emplacement area. With the recent increases in the turbidity of mine water at Springvale Mine, greater volumes of residual waste or sludge, are being generated by the pre-treatment filtration process at the treatment plant. And this material is rapidly building up in the treatment plant settling pond, requiring more rapid removal to maintain capacity. So the residuals mods are seeking approval to temporarily increase the rate, of residual waste transfers to the Western Coal Services reject emplacement area. The mod seeks that through until June 2025. So the key assessment issue for this application is the impact of those increased residual transfers on the volume and quality of discharges from the Western Coal Services site discharge point. Discharges from the site have historically been of poor quality, due primarily to seepage of untreated groundwater from historical mine workings. This includes contributions that are made from the unlined reject emplacement area at Western Coal Services, which seeps into the underground workings and ultimately reports to Cooks Dam and Wangcol Creek via the licensed discharge point. So the addition of saline residual material to the reject emplacement area since 2019 is likely to have contributed to the poor discharge water quality at Wangcol Creek. But despite this, EC in both Wangcol Creek and the Coxs River have been trending down, since 2019. This is shown, if you chalum if you just pop to the next slide, it's shown.

MS ALLEN: There with the monitoring results, which come directly from Centennial's most recent annual review. Notwithstanding, based on the information that was presented by the applicant, and on the advice of the EPA, the department can't be confident that a sustained increase in the rate of residuals transfer would not adversely impact the receiving environment of Wangcol Creek. For this reason, the department has recommended strict conditions that limit the time frame permitted for the increased residuals transfers. The department considers that this does strike a balance between maintaining the efficient operation of the treatment plan in the short terme and protecting water quality of Wangcol Creek and the Coxs River, so water, New South Wales. The then department's water group and EPA also supported time limiting that increases in transfer rate. So the department does note that the EPA has recommended several other mitigation measures for the medium to Long Terme, management of residuals at the treatment plant. While the department generally supports these recommendations, it considers that in order for them to be implemented, they would need to be subject to their own separate merits based assessment and would probably require a modification to the relevant consents. And so for that reason, we, have not adopted those proposed modifications, in the proposed modifications or the recommended conditions. Again, the department has assessed other environmental matters, including impacts on groundwater, reject emplacement capacity and the aquatic ecology, which are documented in our assessment report. So, that's the end of my section. I'll hand back to Jesse or take questions. Whatever the commission would like.

PROFESSOR MENZIES: I'd like to ask a question. And it's not strictly related to this mod, but a more general question on the site. So if we could go back to the last image Callum the one before this, one of the things that's intrigued us, as we've
5 thought about the whole system and the way that that salt's being handled, the water treatment plant strips out salt from the, the water that it's treating. And then that salt partly is brine and partly is crystalline salt is taken across to the. I think I've got this right the, top blue right hand corner there. The ash dump. -

10 **MR PRESHAW:** Yeah.

PROFESSOR MENZIES: Well, it's either used to wet up the ash to deposit it or it's dumped as crystalline salt on top of that, without anything to constrain that salt from moving. And that just seems peculiar to me, Clay. I know I'm asking a question that's
15 that's not one directly related to the mods, but you can see where I'm going here. I'm concerned about and as is the department, you know, how do we, in the Long Terme constrain how much salt is the major contaminant runs out of this site? Could you just put a context around this one?

20 **MR PRESHAW:** Yeah. Look, that's a that's a tricky one because it actually relates to some of the other modifications that are on foot at the moment. -

PROFESSOR MENZIES: Okay.

25 **MR PRESHAW:** So, -

PROFESSOR MENZIES: Remembering everything's recorded. Don't tell me things that you oughtn't to tell me.

30 **MR PRESHAW:** Well, that's right, I think. I think we just probably need to take that on notice. I would say that it's not directly a concern that we have in relation to the two mods we've got before you right now. But that's not to say that it isn't part of our broader consideration of. Saline water and residual materials, including salt, as you're calling it at the site. So I think it's best for us to take that on notice, because it
35 is subject to some other considerations that we're looking at.

PROFESSOR MENZIES: Take it as a signal from we three commissioners that that we are worried about the salt. And I guess I'd go further in saying the little bit of salt in the residual residue being transferred to the disposal area, pales into
40 insignificance compared to the main flows of salt going on in the site. So I guess I know that every system is constrained in what resources it can put into fixing problems. There are bigger problems in this one than the little bit of salt in the residue sludge in in my personal view.

45 **MR PRESHAW:** Yeah. I think perhaps what we should come back with, if I may just for a second, is a description, in some detail of the various discharge points the Centennial manage or have some relationship to, because it may well be that some of

the LDPs are not even centennials. But perhaps to explain it in broad terms, and this is sort of a very simplified version. There has historically been discharges directly from the Springvale Mine site itself, and that's what I described earlier, was the subject of previous considerations and really led to the need for the Springvale Water Treatment Facility. And the whole idea around that was to prevent any direct raw and untreated mine water coming off that part of Centennial's operations. Totally separate to that is the coal services side from which there is still discharges. Right. And that's where I was saying LDP six. I think LDP one will have to come back to you exactly where that's located. But there's I think that's we think -

MS ALLEN: That's LDP one LDP six is LDP one. That's right.

MR PRESHAW: Okay. So. -

MS EVANS: Renamed.

MR PRESHAW: Renamed LDP one. So that's a totally separate issue of which we are still as a collective government trying to. Grapple with and then as a third sort of set of discharges, for lack of a better word, there is the relationship between the treatment facility and Thompson's Creek Reservoir. From which there can be releases. And we'll have to come back to you on this. But I think perhaps one of your questions earlier was around potential releases from the reservoir after additional, water from the treatment facility is put into the reservoir. And that becomes a question around partly around dilution and the capacity of the reservoir. And I think, again, we should probably come back to you with a bit more detail around that. But there's sort of those three different locations at which there has historically been releases and or discharges. But certainly the focus for government has been around the coal services side at LDP six, renamed LDP one. But what's probably also relevant to these two modifications is I think you've got some questions around the relationship. To this mod and the potential releases from the Thompsons Creek Reservoir at the bottom of it.

PROFESSOR MENZIES: Yeah. Clay, there is information available, on the Energy Australia's website about releases from Thompsons Creek Reservoir. It's difficult to get at because it's week by week. You've got to go in and look at. And so we will be I think taking yeah some of that data consolidated up.

MR PRESHAW: And perhaps like this is what we if we haven't presented this clearly enough, we need to explain to you what the releases look like in terms of any potential salinity issues once it's been diluted into the Thompsons Creek Reservoir. And my understanding is without having the numbers right in front of me, that EPA was comfortable with any releases still occurring as they may need to and do occur from time to time, from the reservoir. Even with this modification and a return to a situation that we've had before in terms of what goes back and forth between the reservoir and the treatment facility.

PROFESSOR BARLOW: Yeah. Clay, we haven't had a chance to examine. For those releases yet O'Neill just mentioned. But does that Energy Australia data, Neal have anything to do with any data on water quality? So there's data on volumes? But. What is you know, of clearly the other factor you need to know until you get to a salt
5 load is the concentration of salt in those volumes. So that would be handy to know clay if you have that data.

MR PRESHAW: Sure. I mean, it's worth saying again, this is probably simplistic, but the capacity of Thompson's Creek Reservoir is very large. I think it's something
10 like 27 gigalitres of water. And even with what's proposed here, the amount of, salt or saline water, partially treated mine water that's going in there is unlikely to cause any significant issues once diluted, even if released. From the Thompson Creek Reservoir. But that's just in relation to the issues around Plum Creek Reservoir. And then totally separate to that is the LDP at the coal services site.

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PROFESSOR MENZIES: Thank you.

PROFESSOR BARLOW: Alice.

20 **PROFESSOR CLARK:** Yeah, I think Clay sort of answered the question I was going to ask, but I might ask it anyway. Given the difference between the LDP one and, the reservoir releases when all of that saline comes together and we dilute it in the reservoir. And perhaps, you know, there's something I need to go and read in the EPA's, information there. Does it does it mix or does it kind of sit down the bottom
25 in a saline plume? What physically happens when that amount of salt hits a body of water like that? Just from my information?

MR PRESHAW: Is the question you're asking in relation to the transfer of, partially treated water to the Thompson's Creek Reservoir.
30

PROFESSOR CLARK: Yes.

MR PRESHAW: Yeah, I'm going to say that we should take that on notice, because it's a fairly scientific one. My understanding is that it mixes into the reservoir, but
35 whether there is some dispersion or, you know, I'm not exactly sure. I think we'll have to come back to you on that.

PROFESSOR CLARK: So the next follow on question is, what happens when it leaves there and goes to the next place if it's all beautifully mixed and dispersed, it's a
40 different situation than if it's coming out in plumes, I would guess. And thank you also for explaining. You know, quite simply, I've just drawn a little three circle Venn diagram there with coal services, the power station and the reservoir. It does help to focus the questions around the mod versus the more cumulative aspects. It's hard to look at one without considering the others. And is there a sense that all of this needs
45 to come together in some way to get the right answer as opposed to, you know, the looking at it in piecemeal? I don't really expect a question to that, but an answer to that. But it's an obvious question, I think. And then the other one was, we were going

to ask about the status of a contaminated site at some point in this conversation, and I just wanted to make sure we left enough time for that. Thanks, Neal. Those were my questions to the moment.

5 **PROFESSOR MENZIES:** Thanks, Alice. So. -

PROFESSOR BARLOW: So.

10 **PROFESSOR MENZIES:** Clay, we we might as well pursue that. Alice's last point. It's been suggested that the, area could be declared significantly contaminated land. And that that would have an impact on how the site was, viewed, monitored, rehabilitated, etc.. We're actually looking for help in understanding what that terme means. You know, is this a site that could be deemed contaminated land,
15 significantly contaminated land and, and would that, would that have a value in pursuing, you know, the the overall goal of, reducing contamination, exiting from the site? And once again, we're happy to take this on notice that I'm sure you have some understanding and could start us, along the right track of understanding what's being proposed here.

20 **MR PRESHAW:** Yeah. My understanding of those significantly contaminated lands, that's an EPA designation or something of the like that occurs under the Contaminated Lands Management Act. There's been a few questions today, I think, that are probably best directed at EPA. So, we can speak about this out of session, perhaps, but it might be worth having a joint. Briefing, especially given today's, news
25 in relation to the urgency, or the time frame required for this modification. From Centennial's point of view, I think it could well be worth having a joint briefing with EPA present as well, because they could talk about things that sit outside of the planning processes that are currently afoot. And I think certainly a significantly contaminated lands designation would be something, that they would be able to
30 answer.

PROFESSOR MENZIES: Hi. I'm going to take that one on notice. We'll be back to you.

35 **PROFESSOR BARLOW:** And it's a good idea. I think -

PROFESSOR CLARK: the suggestion -

40 **PROFESSOR MENZIES:** really help us.

MS ALLEN: And I guess that also relates to, the other powers that the EPA has Under POEO Act for these broader pollution reduction programs that might be considered in relation to the site or sites as a whole.

45 **MS ALLEN:** Again that sits outside the planning system.

MR PRESHAW: Yeah. We are I think as a general comment again constrained in some ways to just assess the modifications that are before us right now. Now if there are some substantial concerns about the merits of those modifications, then that's one thing. But we have tried to keep within the bounds of what the modification application are and keep what powers EPA might have under the POEO act separate to that.

PROFESSOR CLARK: Okay.

10 **PROFESSOR MENZIES:** Yeah, fully understood. I and we are also aware of what our job is here. Our questions are more to understand the broader context so that our decision fits in with a bigger picture. Okay. So anything from you?

15 **PROFESSOR BARLOW:** Really not a lot more to add, Neal, except just to mention that last point, that Clay mentioned about the crossover responsibilities with EPA.

20 **PROFESSOR BARLOW:** I don't know whose responsibility is, but there is the question mentioned in the assessment report, about. The Norby principle and as far as water being discharged into the Sydney catchment and under those principles that any impacts of what we are considering should not deteriorate the water going into the catchment but should also have an environmental benefit. And we Clay we're not crystal clear about where legally this mod sits. You know, in terms of what we can consider and what we can't. And but I would have thought under Norby, that the
25 depositing of crystalline salt onto the fly ash, you know, the dumping zone that could result in salinity in Wangcol Creek. I will come under that. So therefore, it's an impact of this. You know, this amendment, this modification. So, we're not crystal clear on that, I would say, but it's sort of where some of our thinking is. And if you can help us there, that would be.

30 **MR PRESHAW:** I mean, I'll take the question in two parts. One is in relation to the application of the Norby test. Yeah. Now, strictly speaking, the Norby test does not apply to modifications. So it does apply to new DA's new development applications, but not to modifications. Now what our position has always been that we still.
35 Consider whether something is neutral, beneficial or otherwise, and with a view to, you know, trying to make to ensure that modification applications still meet the equivalent of a Norby test. But just to be clear, that's not actually a strict requirement for a modification application where it is a precondition for determination of a development application. So that's the first thing I think if we're talking about the
40 placement of, crystallised salt or whatever, in terms of, other parts of. The site broadly. I think our view is has is that that falls outside the scope of the modification. But I'm happy again to take that on notice. And I think that's something we should discuss, with EPA and perhaps and come back and either in writing or separately discuss with you.

45 **PROFESSOR BARLOW:** Yeah. Thank you. That's useful.

MR PRESHAW: It's worth making the point that, whatever emplacement of residuals, crystallised salt that currently occurs would have been separately assessed and approved under previous applications. And as far as I'm aware, there's nothing under this modification application that directly relates to that, but again, might need
5 to take that one to notice and come back to you.

MS ALLEN: Yeah Clay, the crystallised salt is a by-product of the reverse osmosis component of the water treatment plant. This relates to the pre-treatment process of just the simply the filtration, and the filtered water and the sludge that's generated by
10 that filtration process. So there's no additional crystallised salt being generated by these mods or being in placed on the ash emplacement area.

MR PRESHAW: But given your concerns about that, I think we can come back to you on how that was previously assessed, how that's actually managed in practice.
15 And whether there is any relationship to that activity and the proposed activities under these modifications.

PROFESSOR BARLOW: Okay.

20 **PROFESSOR MENZIES:** Okay. Alice You're happy?

PROFESSOR CLARK: Yes. Thank you Niel.

PROFESSOR MENZIES: All right, so just for me to thank you, Clay and your
25 team, it's been really helpful for us to be able to ask our questions and get sensible answers, even for questions that clearly are not directly related to things we're thinking about. And as I stress, we do understand that we're seeking the broader context of what we're doing here. There are a couple of things there that you're going to come back to us on. We'd appreciate that. And the suggestion of meeting with the
30 EPA is also a good one. And we'll look at whether that's feasible for us, and also recognising that we have constraints of time frames that we've got to act within etc. So thanks team for your input. It has been greatly appreciated.

PROFESSOR CLARK: Thank you.
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PROFESSOR BARLOW: Thank you. Thanks for your time.

PROFESSOR CLARK: Thank you.

40 **<THE MEETING CONCLUDED**