

DESALINATION PLANT NUMBER 2

MYALUP COMMUNITY MEETING – 30 MAY 2007

7.00pm, MYALUP COMMUNITY RECREATION CENTRE

QUESTIONS AND ANSWERS - MINUTES

Q. (Michael Berry). What THMs (Tri Halo Methanes) are caused by the Reverse Osmosis process and what will the Corporation do about this –

A. (Gary Crisp). THMs, Tri Halo Methanes, are caused when organic material comes into contact with chemicals including chlorine or bromine. All water supply has the potential to produce THMs. Desalinated water produced at the Perth Seawater Desalination Plant in Kwinana has the lowest levels of organic material of all of our water sources because of the fine filtration process, so it has a very low risk of producing THMs, much lower than most other water sources. A canal from the Kimberleys would potentially produce a lot of THMs.

Q. (Abe Gree) What chemical dosing will occur at the plant? What happens, and what emissions are created?

A. We add chlorine, fluoride and other chemicals to the desalinated water to make it potable, to make the water that goes into the scheme drinkable. Also in the pre-treatment process we treat the seawater with ferric chloride to make it coagulate so we can filter the organic material out of the water. The solid waste filtered out of the seawater then goes to landfill.

Q. Does the desalinated water go into dams?

A. (Nick Churchill) We're still looking at the options for where the water will go– it could go to Canning or Wungong dams for storage.

Q. Does wind power provide enough power for the total desal 1 power need?

A. The wind farm at Emu Downs has 82 wind generators. We take out about 185GWh/year. The wind farm puts into the system a total of about 225GWh/year, but the amount it produces at any one time goes up and down as the wind blows. What we take out is a constant draw from the grid but overall it is less.

Q. Will the powerlines be underground or require pylons?

A. (Nick Churchill) We will buy the power from Western Power. They haven't decided yet exactly where or how those lines will go. There's a significant cost to put 132KV power lines underground but the options will be considered.

Q. The saline water produced by the plant – can it be used? Can it be sold so the money comes back to us.

A. (David Luketina) The plant will produce an enormous amount of super salty brine water. Salt can be extracted either by using much more energy or with massive evaporative ponds. Neither of those are an option at the moment. But if anyone has another solution or suggestions, we'd be happy to listen.

Q. (Adele) What about the greater plan for area? One industry in the area might give other industry an excuse to come here. What's stopping other industry from building up around it?

A. (Chris Elliott). We understand that you're stating your concern. The WA Planning Commission plan for the area will be available for comment soon. It's an important opportunity for local people to have a say in this. We can make sure that your concern is aired to the regulators. Community has been able to oppose other business proposals until now because of noise and other factors and could oppose any further development as well.

Q. What about local employment opportunities? What is there?

A. There will be 20 staff in operations when the plant is running. There will be many more in construction, this is a billion dollar project and will bring significant economic benefit to local community. This may include training in the technology or other opportunities.

Q. (Jan Harwood – Treasurer of the Myalup Community Association) Why can't a power pipe and water pipe go in the same hole?

A. (Nick Churchill) They will probably come from different places but we will look at what opportunities there are. There may be some galvanic effect that limits this.

Q. How far apart do the power lines and water pipelines need to be?

A. The power line needs at least a 25m exclusion zone.

Q. Will the plant be powered by another wind farm?

A. (Nick Churchill) That's one of the things we're looking at. Many other ideas are also being considered including biomass and tidal energy. Wind is a proven technology.

Q. So will you be going to the market? Is there any chance of a wind farm in Myalup?

A. Not that we expect.

Q. How far out will the outflow pipeline go?

A. (Gary Crisp) The pipeline will go to a depth of 10m which is about 500 to 800 metres out. You won't feel it. It dissipates quickly. It has an effect on the environment but not negative, you should see the barnacles on the pipeline from the Kwinana plant.

Q. What is the projected life of plant?

A. The desal 1 life expectancy is 100 years, but economically it is depreciated over 25 years. The material will probably last that long but technology will become obsolete and be updated. So roughly 100 years.

Q. Given that, what consideration given to climate change and rising ocean level?

A. The plant will be approximately 10 metres above sea level so won't be underwater.

Q. You've been calling the plants Perth desalination 1 and Perth 2 – but this is not Perth 2.

A. (Chris Elliott) This plant will link into the integrated system and that's a key point, we're bringing the integrated system closer to the south west.

Q. What about the brine discharge? What effect will there be on beach water quality? Myalup gets the northerly current, we've spotted your UWA research buoys out there. What long term studies on marine environments have been done?

A. (David Luketina) Dozens of studies have been done. Large RO plants have been operating around the world for over 30 years, and there have been no issues at any of them so long as the discharge is done correctly. Here there is good mixing in the ocean, so we expect there will be no issues at all. We have intensive monitoring at the Kwinana plant and we'll also have monitoring here. That's setting a benchmark for studies around the world.

Q. Why not Kemerton? It's 25 m height but surely you can dig the plant down to use gravity feed. They already have a brine discharge pipe.

A. We did look at Kemerton. We have to pump 300 million litres per day which would require too much energy over a longer distance. There's also a risk that it would contaminate the aquifer if there was a leak and there are other environmental risks. Also we'd still need an intake and outtake structure here. We'd still need a major pump station here. We've already committed to provide a much more detailed report for communities and will do so soon.

Q. You said the intake is 8m below sea level, the plant is 10m above sea level, does that mean whole tank is 18m deep? What about dewatering?

A. It won't require a dewatering process because of the construction methods used.

Q. Security – this is state infrastructure and must be very important. The site is very accessible. How's it protected from terrorism?

A. (Gary Crisp) Desal 1 has the highest level of security of any of the Corporation's assets. The security impact is inside the compound only. It won't impact beach access.

Q. What about sabotaging the plant from the water?

A. We have security measures in place. We can't tell you the details.

Q. What's the distance apart from the outlet to the inlet pipe?

A. Laterally they are in the same line but they will be several hundred metres apart in distance from the shore.

Q. What about the Agritech proposal for Wellington Dam – why is that not being desalinated?

A. Surface water options – Wellington is one of those – surface water is most climate dependent and we need a climate independent source. There's not as much water in Wellington Dam as there used to be. And also most of the water is allocated to irrigators. There are other issues to do with water quality to be considered. There are many ideas around for Wellington Dam and an independent panel is considering the options, we're waiting for outcome. Wellington may feature as future source.

Q. (Carolyn) I've been up to the plant at Kwinana. It's appropriate at Kwinana, not at a Binningup beach front. During construction – what access to beach. What happens?

A. During construction there'll be dredging. Desal 1 had construction activities on the beach. There will be sheet piling. There will be restricted access for 1 to 2 years. Kwinana beach is still closed but only because the power plant next door is being built. As the community requests access the closure time can be minimised.

Q. We live here because beach and lifestyle is so vital and important to us. Effect on the dunes will effect our quality of life. The adverse effect of dredging.

A. There is a misconception that the plant will be on the beach or dunes. It will be set back from the dune system. It will be closer to where the current wastewater treatment plant is.

Q. Will the wastewater treatment plant and desalination plant be collocated. What are the issues with water quality?

A. We're looking at whether it will be collocated or moved, that's not decided yet.

Q. What's the construction impact of dredging etc. on reef, will it involve blasting?

A. We will have some impact on the beach during construction. We're working at how we can rehabilitate, minimise impact.

Q. This will impact on our quality of life.

Q. Can you guarantee there will be minimal noise, and strict guidelines. If I walk onto my verandah at night will I hear it? Will I hear it inside and outside? Desal 1 – we want to hear what it sounds like. Do acoustic enclosures stop noise?

A. (Nick Churchill) No, you won't here it outside. We're doing background noise study. The EPA process, the criteria is that there is no disturbance to people at our boundary. This will be different during construction – there will be more noise, and there'll be a different criteria for what's acceptable.

Q. Will we hear it or not?

A. (Nick Churchill) I don't believe you will. We'll use noise experts to do proper studies to make sure it's checked properly. We encourage residents to be involved with that process.

Q. How far in metres will the closest perimeter be from the beach?

A. No metre figures are available but it will definitely be behind the dune system.

Q. How wide will the trench be?

A. It will be about 8 metres wide. We will have to cut through and will restore and replant beach. Access issues during construction – we can take your concerns on board when planning construction process.

Q. Can we take children through the Kwinana plant?

A. We're organising community tours for everyone and if you let us know who wants to go through we can look into that.

Q. If you look at the map of the site...

A. ...We will have to build around the areas of Tuarts and Peppermints if possible.

Q. For the 100 gegalitre plant will the numbers of tanks be doubled? Will they sit close to beach?

A. (Nick Churchill) No they'll sit back 200 to 300m at least. The environmental approval will be sought for the whole 100 gegalitre capacity. As decisions are made we can take people to the site and show them where and discuss it with them. With fishing and diving and other activities there'll be no restrictions. There'll be no restriction to offshore water use (but we're not encouraging additional). Regarding access to the beach during construction, we don't want to make any false promises but if it can be achieved, if this is important we will try to make sure you can still access the beach.

Q. What about the public reserve at front of block.

A. (Nick Churchill) We'll have to get normal approvals to put infrastructure through.

Q. Why is this major piece of industrial infrastructure not in an industrial site?

A. We've made a commitment to get info back to community on why not Kemerton. One of the environmental issues is transporting the salt water over the aquifer.

Q. What about other industrial sites near ocean?

A. There is no more land available at Kwinana. We've checked many sites from Jurien Bay down to Bunbury. We did a multi criteria review. Binningup came up number one.

Q. When will the Kemerton detail be available?

A. Around 6 weeks. We're going to get some information back to the Binningup meeting being held on Monday.

Q. (Marie Dilley) – You said the site is 40 hectares. You said the plant will take up 10 hectares and the next plant up to 20 hectares and you said you won't be using the dunes and you said all the buffers will be on the site. I don't see how it fits if you're not using the dunes. How can you fit the buffers on?

A. The buffer overlays the plant. Chlorine can be stored in the centre of our land. And the buffer is only around chlorine facility.

Q. What about aesthetic and sound buffers. How can you fit those buffers on the site?

A. There's clearly a lack of understanding between what we mean by buffers and what you mean by buffers. We need to provide a better definition of buffers. We'll make sure we get that to you.

Q. The line on the slide of the edge of land misleading.

A. The slide just shows a depiction, we'll make sure we get the proper cadastral boundaries.

Q. If the wastewater treatment plant is relocated – what additional infrastructure will be required to move waste to Kemerton. Birds can get into the pond. Why is it not netted?

A. The wastewater treatment plant has a buffer around it for odour. Housing can only be built to the outside of the buffer. Bird life can get in the same as many wastewater treatment plants and dams around state. It's not viable or practical to net or cover all of them. It's not necessary. If our Planning branch decides we need to move the wastewater treatment plant, then Kemerton is a possibility. Upgrades to the plant are already planned. That might need to be brought forward. That would require more pipelines.