Catherine Ongko

From: Doyle Richardson <doyle.richardson@mitchelldaysh.co.nz>
Sent: Friday, 23 December 2022 3:44 pm
To: Ryan Hodgson
Cc: Steve Paynter; Mark Frisby
Subject: FW: matters of clarification regarding proposed changes APP-20222295

Hi Ryan

As previously discussed, we were planning to get responses to the Stantec wastewater review questions through to you before the end of the year (excluding the groundwater questions). There is still some work to do on the wastewater responses meaning we won't get this through to you until 27th January now.

In the meantime, responses to your clarification questions for notification are included below.

I trust this will suffice for notification early in the new year, but if you have any further questions, please let me know.

Have a great break.

Thanks
Doyle

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From: Ryan Hodgson <Ryan.Hodgson@es.govt.nz>
Sent: Friday, 7 October 2022 8:58 am
To: Doyle Richardson <doyle.richardson@mitchelldaysh.co.nz>
Cc: Mark Frisby <mark.frisby@bluesky.co.nz>; Steve Paynter <steve@bluesky.co.nz>
Subject: RE: matters of clarification regarding proposed changes APP-20222295

Hi Doyle

Thanks for this response. I just have a few follow up questions on the answers provided. See my questions below:

1. How is it possible that only 1,500m3/day of wastewater is generated when the daily water take on its own is 1,500m3/day. Where is the additional volume attributed to biosolids?

The water take is the maximum volume taken per day for use required based on processing needs. The maximum take of 1,500 m^3/d is based on expected peak production. Wastewater is generated from the water use. In meat processing and rendering industries water use is near equivalent to wastewater generation (including biosolids generation). No additional volume is needed to accommodate biosolids.

In addition to the above, whilst the wastewater volume generated on a given day from the processing plant may be similar to the water take volume, the intervention by the on-site wastewater treatment plant allows for the averaging of discharge volumes, based on production patterns. This is because there is approximately 26,800 m^3 of wastewater storage/treatment volume provided by the flow equalisation basin, covered anaerobic lagoon, sequencing batch reactor and the irrigation buffer lagoon.

2. The weekly total groundwater take of 7,000m3/week (assuming this is also the figure for wastewater as described above) when multiplied over the year exceeds the annual totals of 157,000m3 of treated wastewater, and 57,797m3 of biosolids. Please explain how this is so? And if in fact, the annual totals for treated wastewater and biosolids needs to be higher to match the weekly total groundwater take and any potential additional volume of biosolids on top of that.

The weekly maximum water take will not be required every week of the year, the maximum is needed to accommodate peak processing periods and accommodate unforeseen events like decontamination washdowns (above and beyond typical processing). The weekly peak use can coincide with destocking from farms in the event of periods of extended drought as an example. The water abstraction rate has made allowance to accommodate this demand (see Figure 1 – Load Assessment Technical Memo – Appendix C – PDP Land Discharge AEE Technical Report).

3. The current consent enables 1,000m3/day of wastewater discharge which is proposed to be increased to 1,506m3/day. This is an increase of over 50% which would add a significant additional volume of contaminants to land. Page 213 of 288 in Part 3 of the application stipulates that the WWTP can treat up to 1000m3 of wastewater per day. Please explain how the 50%+ increase in wastewater generated that exceeds the capacity of the WWTP to treat this wastewater can be considered a sufficient mitigation to the significant increase in contaminants that then need to be discharged to land.

The proposed WWTP has been designed for a peak period average daily flow rate of 1,200 m^3/d rather than the 1,000 m^3/day stated at the reference above. The plant will be able to manage higher flows for short period of time.

If there were any additional loads entering the wastewater treatment plant (noting that the weekly water volume limit is not changing) it will be more than offset by the upgraded treatment plant which treats the wastewater to a higher standard than previous. This is reflected in the proposed reduction in annual nitrogen discharge limits described in the application and in the email sent on the 8th of August.

4. Please explain how the wastewater discharge and the need for storage is not applicable when compared to FDE discharges and the need for a soil moisture deficit when discharging to land. When there is no soil moisture deficit contaminants such as nitrogen cannot be taken up by the plant root zone and the contaminants would then be lost.

The application is for land discharge of industrial wastewater, which is a discretionary activity. Conversely, land discharge of farm dairy effluent can be managed through permitted and restricted discretionary activities where the mitigations (such as storage to avoid irrigation when soil moisture exceeds field capacity) are more prescribed.

This application provides assessment of environmental effects (including contaminant loss from the root zone from non-deficit applications) and appropriate mitigations given the site is an industrial discharger (not a dairy farm). The application demonstrates that with the proposed operation and mitigations that the effects (including contaminant loss from the root zone from non-deficit applications) are less than dairy farms and more in line with well managed sheep and beef operations.

5. Please provide details of how the various wastewater storage facilities (flow equalisation Basin - 800m3, Covered anaerobic lagoon – 5,000m3, SBR Lagoon 6,000m3, Irrigation Lagooon ?) adds up to 15,000m3 as described in your response.

The irrigation storage lagoon provides 15,000 m^3 of storage. This is the only facility that can reasonably be relied upon to defer irrigation, with the primary function of the other lagoons referred to in the question being wastewater treatment.

6. Please explain the water storage available for the confined aquifer water take only (exclude rainwater and other sources etc). I am requesting this information to determine how the 40L/s rate of take is maintained and is not exceeded.

The abstraction rate for the pumps is set below the allowable take. Up to 334 m^3 of water storage tanks are in place at the site to allow for the variance in daily water demand.

Thanks,
Ryan

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From: Doyle Richardson <doyle.richardson@mitchelldaysh.co.nz>
Sent: Tuesday, 20 September 2022 7:31 AM
To: Ryan Hodgson <Ryan.Hodgson@es.govt.nz>
Cc: Mark Frisby <mark.frisby@bluesky.co.nz>; Steve Paynter <steve@bluesky.co.nz>
Subject: RE: matters of clarification regarding proposed changes APP-20222295

Morning Ryan

Please see attached responses to the questions below.

Thanks
Doyle

Doyle Richardson
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From: Ryan Hodgson <Ryan.Hodgson@es.govt.nz>
Sent: Friday, 12 August 2022 12:49 pm
To: Doyle Richardson <doyle.richardson@mitchelldaysh.co.nz>
Cc: Mark Frisby <mark.frisby@bluesky.co.nz>; Steve Paynter <steve@bluesky.co.nz>
Subject: RE: matters of clarification regarding proposed changes APP-20222295

Hi Doyle

Thanks for that info. I just have a few more questions so I can finish my s95 notification report. I'm hoping we can publically notify the application late next week. See my questions below:

1. What is the maximum total volume of effluent to be discharged each day from all sources including wastewater, biosolids, stockyard solids, paunch and grit.
2. Please confirm that 157,000m3/year of treated wastewater from the slaughterhouse and 57,797m3/year of biosolids (WAS) will be discharged each year and if this volume is an increase on what was previously discharged annually as this volume will be based on a 12 month meat processing season rather than the previous 10 month season. Please also confirm what the annual volumes of discharge was when the plant was being operated over 10 months. Furthermore, please also state the volumes of effluent being discharged from stockyard solids, paunch and grit from the previous 10 month season and the proposed 12 month season.
3. Please clarify or confirm that the BSM-owned land is 130ha with a discharge area of 77ha and the 3rd party owned land is 122ha with a discharge area of 101ha and the total land area is 152ha with a total discharge area of 178ha.
4. Please confirm how much effluent storage is needed to ensure there is enough storage capacity to enable differed irrigation for when a soil moisture deficit exists. A effluent storage calculation such as a Massey DESC equivalent would be sufficient to show there is enough storage.
5. Please confirm what the rate of take is for the water abstraction in litres per second and confirm if there is any water storage tanks and how much volume they can store.
6. Please confirm what the discretionary allocation of the confined aquifer is and the amount currently allocated for the confined aquifer in the RWP. I note that an assessment was provided against the relevant appendices of the pSWLP including appendix L.6 but not the RWP.
7. Please clarify how the discharge of dewatered groundwater and stormwater to surface water should be considered under rule 3 in the RWP and not rule 1 or 2 of the RWP.
8. Please confirm what the NZTM2000 coordinates are of the discharge point into the open drain from dewatered groundwater and stormwater.
9. Can you please provide the Overseer report and access to the Overseer budget so I can assess this information against that provided in the application and can have it peer reviewed if necessary.

If you can provide as much detail as possible to the above questions that would be much appreciated. If you have any questions let me know.

Thanks,
Ryan

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From: Doyle Richardson <doyle.richardson@mitchelldaysh.co.nz>
Sent: Monday, 8 August 2022 5:51 PM
To: Ryan Hodgson <Ryan.Hodgson@es.govt.nz>
Cc: Mark Frisby <mark.frisby@bluesky.co.nz>; Steve Paynter <steve@bluesky.co.nz>
Subject: RE: matters of clarification regarding proposed changes APP-20222295

Hi Ryan

Answers underlined below.

Thanks
Doyle

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From: Ryan Hodgson <Ryan.Hodgson@es.govt.nz>
Sent: Monday, 8 August 2022 12:33 pm
To: Doyle Richardson <doyle.richardson@mitchelldaysh.co.nz>
Cc: Mark Frisby <mark.frisby@bluesky.co.nz>; Steve Paynter <steve@bluesky.co.nz>
Subject: matters of clarification regarding proposed changes APP-20222295

Hi Doyle

I am just putting together the draft documents for notification and I have a few questions around what is being proposed in comparison to the current activity. See below:

- What will be the method of irrigation? Spray irrigator or K-line pods or both? The method of irrigation is K-Line pods.
- Due to the increase in the meat processing season from 10 months to 12 months, will there be subsequent annual increases in:
  - the annual volume of effluent being generated and discharged to land; The volume of treated wastewater discharged to land could increase compared to that currently undertaken in practise. It could also increase on a daily basis as no daily limit on what can be discharged is proposed. It is important to note here, that while this is possible, the key driver of potential impacts from the irrigation of treated wastewater to land is the nutrient loading rates, in particular nitrogen loading rates. These are proposed to be reduced from 450 kg/ha year to 350 kg/year on cut and carry operations and 350 kg/year to 200 kg/year on grazed pasture . In addition, maximum irrigation application depths are proposed to be reduced from 35 mm/day to 15 mm/day from 1 April to 30 September each year.
  - the annual groundwater take; in practise, potentially, but the effects assessment is based on the assumption that Blue Sky Meats is taking the maximum volume every week and that hasn't changed from that allowed for under the existing consent.
  - the annual volume/time of discharging contaminants to air; and Yes, this will be the case for the initial period of the consent until the hot water boiler is decommissioned in August 2024. But this is driven by the increased limits applied for until the hot water boiler is decommissioned. After that, there will be an improvement compared to what is currently consented.
  - the annual volume of dewatered groundwater and surface water being discharged to surface water This won't change the volume of dewatered groundwater as it is a passive system independent of the processing operation, ie groundwater levels will dictate the volume of discharge. The amount of stormwater discharged depends on the amount of rainwater that falls etc, so is also independent of the processing operation.

If you could get back to me on the above it would be much appreciated.

Kind Regards,
Ryan

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