From: Mary Wood <Mary.Wood@ghd.com>
Sent: Wednesday, 2 April 2025 12:20 pm
To: Nick Eldred <Nick.Eldred@ghd.com>
Cc: Stephen Douglass <Stephen.Douglass@ghd.com>; Dusk Mains <Dusk.Mains@ghd.com>; Maurice Dale <maurice.dale@boffamiskell.co.nz>
Subject: RE: Hearing - RM23.185 - Dunedin City Council - Right of reply

Hi Nick

Agreed matters:

1. Presenting leachate, groundwater, surface water, and sediment pond monitoring in separate tables is supported. The identified parameters are generally considered appropriate, subject to the comments below and in the consent document.
2. The updates to the contingency actions and adaptive management conditions are supported, in particular the inclusion of mitigation measures in Condition 58(d).

Unresolved matters/matters of disagreement

ORC experts have not been provided with proposed trigger levels for review. As such, comments are limited in their specificity.

1. It is not clear whether DCC takes the position that the X in the Trigger Level column of the tables is a placeholder where a number will go, or whether this is to signify that there will a trigger and it will be in the LDMP. ORC's position is that trigger levels should be specified in the consent documents so that they are unambiguous and unable to be changed via the annual review of the LDMP.

- An X in the column reflects that a trigger will be in the LDMP.
- As the LDMP would require ORC agreement, it is unclear why this would not be a suitable mechanism for recording trigger values. If values need to be adjusted then changing the LDMP (and obtaining ORC approval) is a more efficient mechanism than modifying a consent condition.

2. All parameters that are measured must have an associated trigger level, except for stream level, temperature, or conductivity, where it is appropriate to have no trigger. It is not clear why many parameters in Tables 2-4 do not have an X in the trigger level column.

- We consider that there is a difference between sampling of parameters to provide contextual information and sampling with specific values where, if exceeded, would require further investigation to assess whether there is an issue associated with the landfill activities. This is why some parameters are shown for sampling but do not have an X in the trigger level column. The approach has been that sampling should be targeted towards identification of the risk of leachate entering the receiving environment. Placing a trigger level on all parameters, particularly those with general water chemistry has the potential to generate unnecessary analysis and reporting. This approach of trigger levels for only some parameters is consistent with the Smooth Hill consent.

3. Any parameter that is measured in the surface water receiving environment should also be measured in the sediment ponds.

- If monitoring in the sedimentation ponds and wetlands have only limited trigger levels then this would be acceptable and we can include for completeness. These are treatment devices and not open/flowing bodies of water so trigger levels are not considered appropriate for most of the parameters indicated by ORC.

4. Measuring TSS in the sediment ponds is of critical importance to understanding the degree to which the landfill is contributing sediment to the receiving environment. Similarly for E.coli. Failing to take measures to understand the contribution the landfill is having to loads of contaminants of concern within the receiving environment, presumably on the basis that these parameters are already elevated in the receiving environment, is inappropriate.

- We can include TSS sampling for the sediment ponds, however we do not consider a trigger level for TSS is appropriate as the sediment ponds/wetlands are treatment devices and are not open/flowing bodies of water.
- We have not avoided sampling of TSS or EColi due to presumed elevated levels in the receiving environment as suggested above. We have attempted to target parameters that would support the assessment of risk associated with leachate entering stormwater runoff. EColi is not considered to be a suitable indicator of leachate risk as the presence of birds and other wildlife in the area can generate higher EColi values and do not necessary offer any additional insight into whether leachate has entered the surface water. We had, for example, included SVOC, VOC, PFOS and PFOA in sediment pond sampling for the purpose for flagging this risk. We can include EColi monitoring in the sedimentation ponds and wetlands for completeness but do not consider that trigger levels are appropriate.

5. Without access to raw data, ORC's experts cannot comment on how much variance is provided by 3 standard deviations instead of 2 SD and therefore cannot comment on whether the mean +/- 3 SD is appropriate to set trigger levels. Mean +/- 2 SD was recommended by ORC experts.

- Mean plus 3SD is the approach used for the Smooth Hill consenting and is considered a reasonable approach.

6. Triggers for surface water parameters (Table 3) should be the lower or the five-year trend or the ANZG 80% DGV (or other appropriate guideline – refer Pete Wilson's evidence).

- We have responded to this in the comments