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Carl Steffans
Technical Director – Water Resources
Pattle Delamore Partners

Dear Carl

Potential or actual impacts of the current Taylorville Resource Park Ltd (TRPL) landfill leachate management on groundwater, surface water and human drinking water sources including the Grey District Council Coal Creek community water supply

I understand Grey District Council has been concerned about the impacts of any leachate discharges resulting from the operation of the landfill which could affect the integrity of the Grey District Council water supply. Please provide hydrogeological expert opinion in the form of a short desk-top study report on the potential or actual impacts of the current TRPL landfill leachate management on groundwater, surface water and all potentially affected drinking water sources including the Grey District Council Coal Creek community water supply based on the existing information involving the following key points not excluded to:

Discharges of leachate from the landfill

- Is there actual or potential leachate discharge from the site and if so, what are the potential sources and the locations?
- What is the chemical composition of the leachate including the levels of key known landfill contaminants such as heavy metals in comparison to the *Water Services (Drinking Water Standards for New Zealand) Regulations 2022* maximum acceptable values for inorganic determinands and the *2018 Australian and New Zealand Fresh & Marine Water Quality* default guideline values (DGV) for toxicants?

Flow pathway of leachate from the landfill

- If discharged the potential or actual leachate discharge pathway?
- The anticipated chemical and physical changes occurring in the leachate following the discharge?

Leachate discharge impacts on groundwater and surface water

- What are the impacts of any leachate discharge on groundwater and surface water?
- The likely locations of the impacts in groundwater and surface water

Location and specification of the GDC water intake and drinking water source water quality

- Location of the drinking water sources and water intakes in relation to the landfill leachate discharge pathway.
- If the discharge pathway being ascertained as upstream of the GDC water supply intake or any other human drinking water sources is there a potential for the source water quality to be affected by the leachate? If so the extent of the impacts on the source and treated water quality (this assessment does not need to be performed if ascertained no impacts on drinking water sources from the TRPL landfill leachate management and if impacted the assessment must include any available and relevant laboratory reports on raw and treated water quality assessment).

Future Hydrogeological assessment required to improve the quality of the existing information on any leachate pathway and groundwater/surface water assimilation

- Identify any hydrogeological information gap affecting the existing quality of the information.



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- Recommendations on additional hydrogeological information required to improve the quality information including new monitoring bores, locations of the above bores and any other relevant hydrogeological data/information.

At this stage we expect the short desk-top study report to be based on the existing information which you may already hold and gather any readily accessible and relevant information from WCRC, GDC and TRPL. We need the reporting urgently as such we are happy to provide or coordinate the provision of any necessary information required to complete the short desk-top report. Please send us a short-term contract and estimate to complete the above work as soon as practicable.

Yours sincerely

Selva Selvarajah
Technical Advisor- Regulatory and Policy
West Coast Regional Council