General

1. The consent holder shall ensure that all works are carried out in general accordance with:

   (a) the application documents received by the Council on XX

   (b) further information provided on and 2 September 2022;

   (c) the evidence received on 15 July 2022 and 4 November 2022;

   Where there is any apparent conflict between the application and consent conditions, the consent conditions shall prevail.

2. The consent holder shall ensure all persons undertaking activities authorised by this resource consent are made aware of the conditions of the consent and ensure compliance with those conditions. A copy of the consent documents shall be kept available on site and shall be produced without unreasonable delay upon request from a servant or agent of the Council.

Lapse and expiry

3. Pursuant to section 125 of the Act, this consent shall lapse 5 years after the date of issue of the consent unless either the consent is given effect to, or the Council has granted extensions pursuant to section 125(1A)(b) of the Act.

4. This consent shall expire 17 years after the date it commences.

5. The discharge of clean fill to land shall cease no later than 15 years after the date this consent commences.

Prior to the work

6. The Council's Team Leader - Monitoring & Enforcement shall be notified in writing:

   (a) A minimum of 10 working days prior to commencement of discharge to land; and

   (b) Prior to the recommencement of work where works have been discontinued for more than one month.

   Notification shall include:

   (a) The proposed start date for the period of work; and

   (b) The name and contact details of the following persons:

      (i) A representative nominated by the consent holder who shall be the Council's principal contact person in regard to matters relating to this resource consent; and

      (ii) The Site Manager (if not the consent holder's representative).

Should either of the above persons change during the term of this resource consent, the consent holder shall provide the new name and contact details, in writing, to the Council's Team Leader - Monitoring & Compliance within five working days.

Site meeting

7. The consent holder shall arrange for a site meeting between the consent holder's representative and the Council's assigned monitoring officer, which shall be held on site prior to any works commencing. No works shall commence until the Council's assigned monitoring officer has completed the site meeting.

Submission of plans

8. The consent holder shall, at least 10 working days prior to the commencement of works, prepare and submit a Groundwater and Clean Fill Management Plan (GCMP) prepared in accordance with condition 10 to the Council's Team Leader - Monitoring & Enforcement for certification. No works shall be undertaken until this management plan has been certified by the Council's Team Leader - Monitoring & Enforcement, unless condition 9 is invoked.

9. The following shall apply in respect of condition 8:

    (a) the consent holder may commence the activities in accordance with the submitted plans 15 working days after their submission, unless the Council advises the consent holder in writing that it refuses to certify them on the grounds that it fails to meet the requirements of the condition and gives reasons for its decision; and

    (b) should the Council refuse to certify the plan, the consent holder shall submit a revised plan to the Council for certification. Clause (a) shall apply to any resubmitted plan.

10. The GCMP required by condition 8 shall demonstrate the best practicable option to ensure that discharge of clean fill to land is managed to avoid adverse effects on groundwater, to:

- Ensure that excavations do not expose groundwater in excavations with the exception of small scale temporary test pits that are back filled within 30 minutes.
- Ensure that all backfill material is strictly managed to ensure it meets Condition 14 below).
- Minimise any change to the physical and chemical properties of groundwater as result of the land use and discharge activities associated with clean fill activities (as defined by the groundwater chemistry monitoring requirements).
- Ensure that under no circumstances will the land use and discharge activities associated with quarry activities result in groundwater quality exceeding the

acceptable values in the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 in downgradient water supply bores.

11. The GCMP shall be in general accordance with the draft GCMP prepared by Pattle Delamore Partners dated March 2023 and shall address, as a minimum:

    (a) Consent Compliance and Key Performance Indicators, to be consistent with these conditions of consent

    (b) Clean fill materials

    (c) Proposed clean fill management system

    (d) Groundwater level monitoring and excavation controls

    (e) Response and mitigation to a spill

    (f) Groundwater quality monitoring

    (g) Water quality complaints

    (h) Reporting requirements

Operational conditions

Backfilling controls

12. Backfilling on site with clean fill shall be undertaken in accordance with the certified GCMP.

13. Commencement of clean filling within a Stage shall occur at locations at the greatest upgradient distance from any water supply bores, as far as can practicably be achieved.

14. Only material that meets the requirements of Table 1 below shall be imported to the site for backfill.

Table 1: Summary of Clean fill Acceptance Criteria[1]

Source	Acceptable Material	Unacceptable Material
Materials sourced onsite.	• Uncontaminated natural material such as soil, clay, rock and gravel. • Maximum biodegradable materials (i.e., vegetative matter) to be no more than 2% by volume per load of incidental and is limited to incidental organic materials.	• Contaminated soil, clay, rock and gravel. • Materials containing more than 2% by volume per load of biodegradable organic matter, including peat, loams and topsoils with high organic content. • Manufactured materials including concrete, bricks, tiles, etc.
Materials sourced offsite	• Uncontaminated natural material such as soil, clay, rock and gravel. Compliance with this definition will	• Contaminated soil, clay, rock and gravel.

Table 1: Summary of Clean fill Acceptance Criteria[1]		
Source	**Acceptable Material**	**Unacceptable Material**
	be achieved by testing a representative composite sample of imported fill material to demonstrate that total soil contaminant concentrations do not exceed regional soil background concentration limits. • Maximum biodegradable materials (i.e., vegetative matter) to be no more than 2% by volume per load of incidental and is limited to incidental organic materials.	• Any material sourced from any site listed on the Tasman District Council Hazardous Activities and Industries List (HAIL) register (as defined by the Ministry for the Environment) or any site where the Clean fill Operator has a reasonable expectation of HAIL activities occurring, even if it is not listed on TDC's HAIL register and for both these categories of sites, the HAIL activity is known to have been occurring before the date the clean fill material is received. • Materials containing more than 2% by volume per load of biodegradable organic matter, including peat, loams and topsoils with high organic content. • Manufactured materials including concrete, bricks, tiles, etc.
Note: [1]The clean fill acceptance criteria provided in this table shall be applied to all material placed at depths greater than 1 m below ground level. The Soil Management Plan applies to topsoil and sub soil.		

Furthermore, any material, that is understood to comply with the Table 1 definition, but displays visual or olfactory evidence of contamination, shall be rejected.

15. Any backfill material sourced from offsite shall only be brought to the site by the Consent Holder, and shall be pre-screened for compliance with these clean fill requirements before being brought to site in accordance with the Clean Fill Procurement SOP detailed at Appendix A of the draft GCMP. A record shall be kept of all clean fill used as backfill. The record shall be in accordance with the requirements specified in the Clean Fill Procurement SOP. This record shall be kept available on site, and shall be produced without unreasonable delay upon request from a servant or agent of the Council.

Groundwater quality monitoring

16. The following monitoring of groundwater will be undertaken:

(a) Collection of groundwater samples from at least one dedicated monitoring bore located upgradient at the southern extent of the quarry areas (i.e. Bore 2 (24544 or Bore 4 (24546), representative of background water quality) and at least two dedicated bores located downgradient of the quarry site near the northern extent of the quarry (i.e. Bore 1 (24543) and Bore 3(24545)) as shown in Figure 1 (attached to these conditions).

(b) Groundwater samples from the dedicated monitoring bores listed in Condition 16((a)) will be collected at three monthly intervals. At least four samples (one year of samples) will be collected prior to the commencement of clean filling activities and sampling will continue until two years after clean filling activities cease.

(c) Collection of groundwater samples from a dedicated monitoring bore located at or about coordinates 1595980 mE / 5447316 mN (NZTM2000) (proposed additional monitoring bore – Bore 5 as shown in Figure 1) will be undertaken at monthly intervals. At least two samples will be collected prior to the commencement of clean filling activities and sampling will continue until two years after clean filling activities cease.

17. The five dedicated monitoring bores referred to in Condition 16 shall allow groundwater samples to be collected across the full the range of groundwater level fluctuations.

18. The five dedicated monitoring bores referred to in Condition 16 shall be made accessible to the Tasman District Council at all times for the purpose of groundwater sampling.

19. Groundwater samples shall also be collected annually from all water supply bores located within 500 m downgradient of the clean fill, subject to approval of the bore owner(s) and the landowner(s). This sampling will continue until two years after clean filling activities cease.

Advice note

This condition has been volunteered by the Applicant.

20. Prior to the collection of the initial groundwater samples from the water supply bore(s) in accordance with Condition 19, the Consent Holder shall undertake a bore condition survey to identify any existing potential sources of contamination related to the condition of the bore head or its proximity to localised sources of contamination.

21. The Consent Holder shall ensure that all groundwater samples shall be taken by a suitably qualified and experienced practitioner using methods described in the NEMS document "Water Quality – Part 1 of 4: Sampling. Measuring, Processing and Archiving of discrete Groundwater Quality Data" (2019). All samples for dissolved metal analysis must be filtered through a 0.45-micron filter onsite before being placed into an acid preserved sampling bottle.

All samples must analysed for the contaminants listed in Table 2 by an International Accreditation New Zealand (IANZ) laboratory.

Table 2: Water quality parameters and trigger concentrations		
Parameter	**Trigger concentration**	**Note**
Depth to water level	-	Measured prior to purging (where possible)
pH	<6.5 or >8.5	field and laboratory measurement – trigger value taken from Miners Road Consent example (CRC204349), recognising shallow groundwater naturally has a low pH.
Electrical Conductivity	-	field and laboratory measurement
Water temperature	-	field measurement
Calcium	-	
Magnesium	-	
Hardness	200 g/m³	GV (Calcium + magnesium)
Alkalinity	100 g/m³	As $CaCO_3$ – trigger value taken from Miners Road Consent example (CRC204349).
E. coli	1 MPN/100ml	MAV
Ammoniacal-N	1.2 g/m³	GV
Nitrate-N	5.65 g/m³ (annual average) 11.3 g/m³ (maximum)	5.65 g/m³ - Half MAV
Dissolved Boron	1.2 g/m³	Half MAV
Dissolved Aluminium	0.1 g/m³	GV
Dissolved Arsenic	0.005 g/m³	Half MAV
Dissolved Cadmium	0.002 g/m³	Half MAV
Dissolved Chromium	0.025 g/m³	Half MAV
Dissolved Copper	1 g/m³	Half MAV
Dissolved Lead	0.005 g/m³	Half MAV
Dissolved Nickel	0.04 g/m³	Half MAV
Dissolved Manganese	0.04 g/m³	GV
Dissolved Iron	0.3 g/m³	GV
Sodium	200 g/m³	GV
Sulphate	250 g/m³	GV
Chloride	125 g/m³	Half GV
VOC compounds	Any detectable presence	
Total Petroleum Hydrocarbons	Any detection >0.1 g/m³	

Table 2: Water quality parameters and trigger concentrations		
Parameter	**Trigger concentration**	**Note**
NOTE: Trigger values include the guideline values for aesthetic determinands from the Aesthetic Values for Drinking Water Notice (2022) or 50% of maximum acceptable values in the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 which take effect on 14 November 2022.		

22. The Consent Holder shall provide the water quality monitoring results to the Tasman District Council: Attention – Monitoring and Compliance within one month of them being received.

Assessment of Groundwater Quality Samples

23. An exceedance of the trigger concentrations in 2 will be deemed to have occurred if:

    (a) The concentration of a contaminant in a downgradient bore exceeds the relevant trigger concentration in 2 and the year-to-year median concentration of the same parameter in the upgradient bore is below the respective trigger concentration in 2; or

    (b) The year-to-year median concentration of a contaminant in the downgradient bore exceeds the year-to-year median concentration in the upgradient bore for the same parameter by more than 20%, and the year-to-year median concentration in the upgradient bore for the same parameter exceeds the trigger concentrations in Table 2.

    See Figure 2 (attached to these conditions) for an example diagram of operation of the exceedance criteria.

24. The groundwater quality data from all the sampled bores shall be assessed annually for trends using NIWA TimeTrends or equivalent. A trend in water quality for an individual parameter in a downgradient bore will be deemed to be "significant" if the p-value of the trend is less than 0.05 and the data trend for that parameter is toward the relevant trigger concentration in Table 2.

Response to Issues Arising from Groundwater Quality Monitoring

25. If the trend analysis of the groundwater quality data undertaken in accordance with Condition 24 identifies a "significant" trend in the direction of a breach of trigger level, the Consent Holder shall:

    (a) Notify Tasman District Council – Monitoring and Compliance.

    (b) Commission an investigation and, if appropriate, recommendations for remedial action from a suitably qualified and experienced person (SQEP) into the potential cause(s) of the trend in the water quality data, which may include:

        i. Review of documentation for clean fill accepted at the clean fill site.

        ii. Additional testing of clean fill placed within an excavation.

iii. Undertaking additional groundwater monitoring beyond the routine sampling.

iv. Cessation of activities that may have caused the exceedance.

v. Removal of the contaminant source(s).

vi. Stabilisation or capping of the contaminant source(s).

vii. Provide recommendations for further actions and monitoring to be undertaken.

26. Any material removed in accordance with Condition 25((b))v shall be disposed of at a facility authorised to receive such material, and the Consent Holder shall provide the Council, Attention: Regional Leader – Monitoring and Compliance, with written confirmation of such disposal within 10 working days.

27. If there is an exceedance as determined by Condition 23 in a downgradient dedicated monitoring bore listed in Condition 16, the Consent Holder shall as soon as practicable and within 72 hours of receiving that result:

(a) Obtain a second sample of groundwater from the bore(s) in which the exceedance was identified in accordance with Condition 16.

(b) Obtain a sample of groundwater from the upgradient bore specified in Condition 16.

(c) Analyse these samples in accordance with Condition 21.

28. If the results of analysis of the second groundwater sample(s) carried out in accordance with Condition 27 show that none of the concentrations of contaminants analysed exceed the criteria in 23 23**Error! Reference source not found.**, the consent holder shall continue to sample groundwater in accordance with Condition 16.

29. If the results of analysis of the second groundwater samples carried out in accordance with Condition 2725 show a continued exceedanceTable as determined by Condition 23, the Consent Holder shall:

(a) Notify the Tasman District Council – Monitoring and Compliance within 72 hours of receiving the results of the sampling in Condition 27.

(b) Notify the closest downgradient water supply bore owner/landowner and collect groundwater samples from the water supply bores located within 500 m downgradient of the clean fill (subject to approval of the bore owner and the landowner), within 72 hours of receiving the results of the sampling in Condition 27.

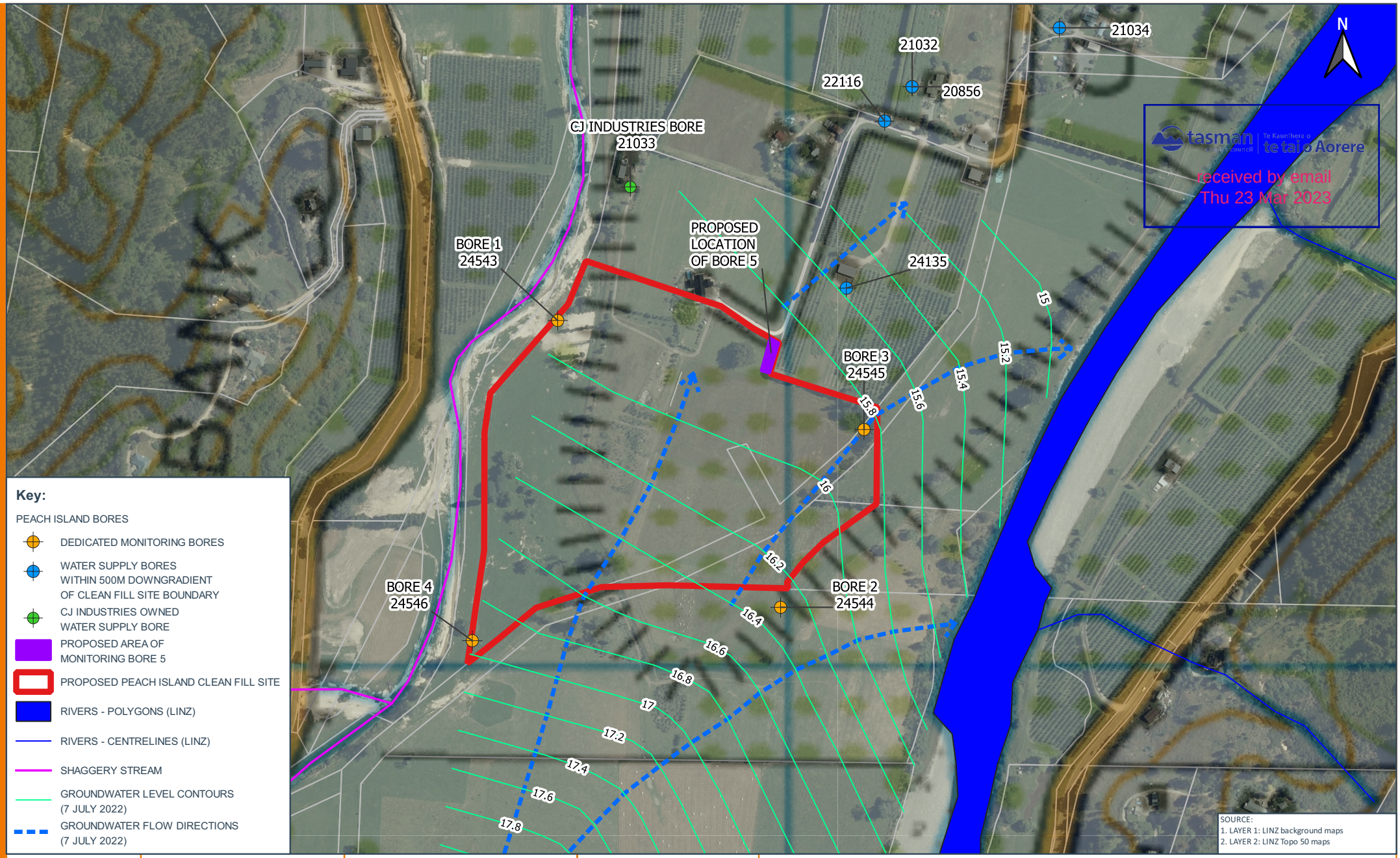
(c) Undertake an investigation to determine the source of the change in concentrations.

(d) Undertake additional monitoring beyond the routine sampling based on the outcome of the investigation in Condition 299((c)).

30. If the monitoring undertaken in accordance with Condition 199 or Condition 29(29**Error! Reference source not found.**) shows that the drinking water quality in the downgradient water supply bore(s) exceeds the trigger concentrations in Table 2, then additional samples shall be collected from that water supply bore within 72 hours of receiving the initial results and the user(s) of that bore notified of the results. If additional samples continue to show an exceedance of the trigger concentrations in Table 2, then the Consent Holder shall provide an alternative drinking water supply to a similar standard as existed prior to commencement of this consent.

Duration of water quality monitoring

31. Water quality monitoring detailed in the conditions of this consent shall continue for no less than two years following completion of quarrying, backfilling and reinstatement and rehabilitation activities on the site. All water quality assessment and responses to issues identified, as detailed in these conditions, shall continue to apply over this period.



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CJ INDUSTRIES LIMITED

FIGURE

FIGURE 1: LOCATION OF EXISTING AND PROPOSED MONITORING BORES AND WATER SUPPLY BORES WITHIN 500M DOWNGRADIENT OF CLEAN FILL SITE

PROJECT

PEACH ISLAND PROPOSED QUARRY - HYDROGEOLOGY

Filename as received: "2023-03-23 Applicant proposed discharge conditions Appended Figures.pdf"

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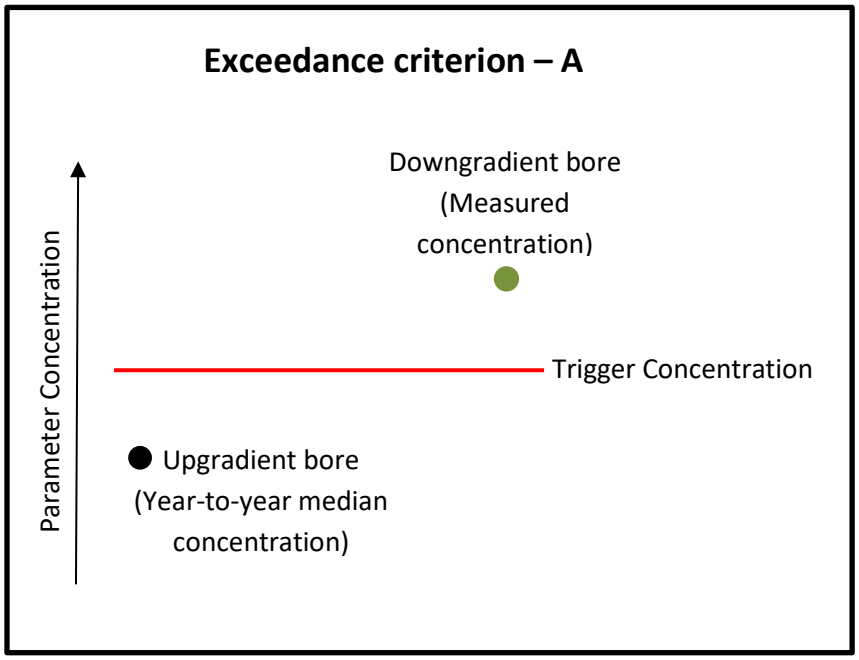

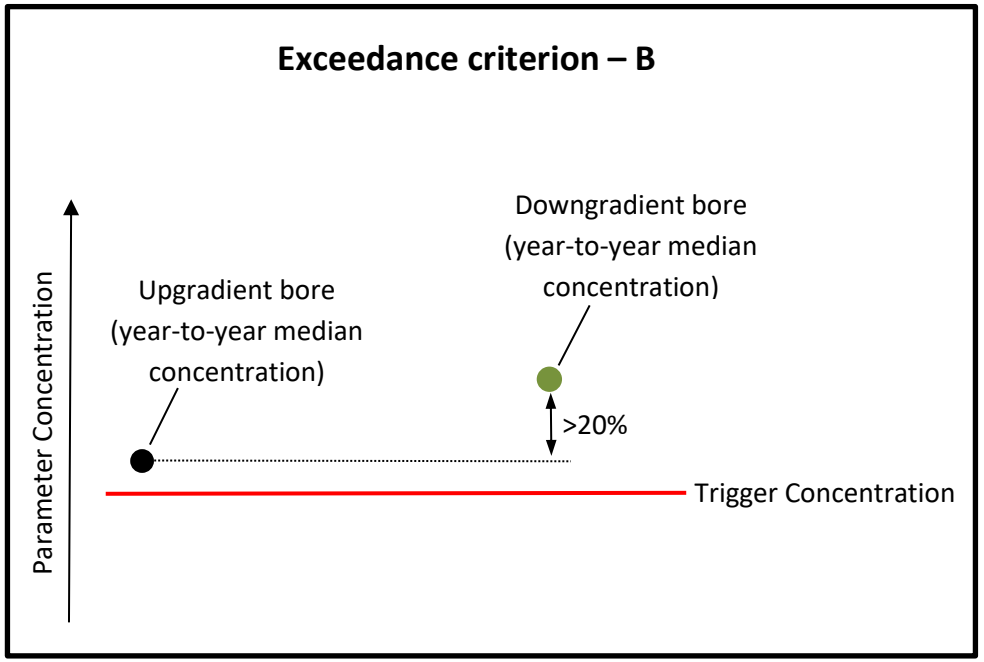

Exceedance Criterion – A: The concentration in the downgradient bore exceeds the relevant trigger concentration in Table 3 of the GCMP and the year-to-year median concentration of the same parameter in the upgradient monitoring bore is below the respective trigger concentration.

Exceedance Criterion – B: The year-to-year median concentration in the downgradient bore exceeds the year-to-year median concentration in the upgradient bore for the same parameter by more than 20%, where the year-to-year median concentration in the upgradient monitoring bore exceeds the trigger concentrations in Table 3 of the GCMP.

FIGURE 2: DIAGRAM ILLUSTRATING CRITERIA FOR DETERMINING WHEN A GROUNDWATER CHEMISTRY EXCEEDANCE HAS OCCURRED