

Attachment 1

1. Permit Holder

Water and Waste Division
Wellington City Council
PO Box 2199
WELLINGTON

2. Existing Resource Consent

WGN900025 [20847]. A restricted coastal activity to continuously discharge disinfected secondary treated effluent from a submarine outfall south of Lyall Bay.

3. Condition to be Varied

Wellington City Council has applied under section 127 (1)(b) of the RMA 1991 for a change of a Resource Consent Condition on the grounds that a change in circumstances has caused the condition to become inappropriate or unnecessary.

Originally the method for analysing the faecal coliform content of the quality of the effluent was not specified in the consent. In October 1993 WRC, at the request of the consent holder, undertook a review of condition 7 for the purpose of replacing the maximum daily values with more “appropriate statistical expressions”, and to provide a complementary monitoring specification to take account of any replacement statistical expression conditions” (p.2 Decision of the Hearings Committee Considering a Review of Conditions, Hearing Date 10 December 1993, the “Decision”). Original conditions 7(a), (b) and (c) were replaced with current conditions 7 (a), (b) and (c) and 7A, 7B (a) and (b) and 7C.

The applicant states that “*at the time the conditions were imposed, it was unclear which regime was the most appropriate for monitoring faecal coliforms*”. The Decision states that the condition requiring the faecal coliform grab sample “*would act as an audit and monitor on the 24 hour composite sampling regime, and would enable the “build-up” over time of a picture of the plant’s operation. An appropriate review would enable the Regional Council to review for faecal coliforms if the 24 hour flow proportioned composite sampling was found to be giving inaccurate results*”.

The change sought is not interfering or changing any of the treatment processes but simply changing a sampling method for monitoring.

4. Reasons for Variation

The applicant states that “*Since the plant began operating, faecal coliform bacteria in the effluent has been measured using both a composite sampling procedure and a*

grab sampling procedure. A comparison of composite samples and grab samples over an extended time period from 1998 to 2000 has shown a marked variation in faecal coliform bacteria levels. The grab samples consistently show results well below those results from the composite samples.

Since the conditions were imposed technical knowledge on environmental monitoring has increased. The change in both technical knowledge and a build up of information on the operation of the treatment plant has caused the condition requiring a composite sampling procedure as well as a grab samples procedure when measuring faecal coliform bacteria in the effluent to become inappropriate”.

5. **Scope of the Variation**

The holder of resource consent may apply to the consent authority for the change or cancellation of any condition of that consent (other than any condition as to the duration of the consent).

6. **Notification**

The notice of review was publicly notified in the *Evening Post* on Saturday 11 November 2000 in accordance with Section 130 of the RMA. The review was notified because the Regional Council was not satisfied that the requirements of Section 130 (3) RMA could be fulfilled.

7. **Submissions**

Two submissions were received by the close of the submission period on Friday 8 December 2000. One submission was conditionally supporting and one was neutral on the change (The Public Health Service replied that they did not wish to comment on the application).

The conditionally supporting submission requested that the faecal coliform sampling be undertaken during peak flows. A sampling time was agreed on between the submitter and the applicant and the submitter withdrew their right to be heard at a hearing.

8. **Matters Outlined in Section 131**

Section 131 RMA outlines what matters the Regional Council shall consider when reviewing the conditions of a resource consent. These aspects include:

- the matters in Section 104; and
- whether the activity allowed by a resource consent will continue to be viable after the change.

Section 104 of the RMA, includes those matters that the Regional Council should have regard to when considering an application for resource consent, i.e., a review of consent conditions. When considering an application for a Restricted Coastal Activity permit the Regional Council should have regard to:

- the actual and potential effects on the environment of the activity;
- the nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects; and
- any possible alternative methods of discharge (not relevant to a review of consent conditions).

Appendix 3 outlines the matters the Environment Committee must have regard to under Sections 104 and 131 RMA when considering the review of consent conditions.

9. **Location**

The location of the land to which the resource consent condition review relates is the Moa Point Wastewater Treatment Plant, Stewart Duff Drive, Wellington, at or about map reference NZMS 260 R27; 615.841.

The legal description of the property is Part Certificate of Title 460/309

10. **Beneficial Effects of the Moa Point Wastewater Treatment Plant**

Wellington's wastewater used to be discharged with very little treatment through a short outfall at Moa Point on the southern coast. This activity polluted some the City's most beautiful coastline. The creation of the new treatment plant has enabled the old outfall area to gradually restore itself to its former state.

Moa Point Wastewater Treatment Plant was officially opened on 21 September 1998. Moa Point treats 65 million litres per day of Wellington's Wastewater before being discharged to sea through a new 1.8km pipeline. Sludge from the treatment plant at Moa Point is piped 8.8km to the dewatering plant at Carey's Gully. Liquid is then removed from the sludge and sent back to Moa Point for recycling through the treatment system. The sludge at the dewatering plant is then transferred to the Living Earth Plant also at Carey's Gully where it is mixed with shredded garden waste into compost.

11. **Assessment of Environmental Effects**

The permit holder considers that there has been a change in circumstances since the consent condition was imposed which now makes the condition 7 inappropriate.

The levels of faecal coliform bacteria in wastewater effluent that has been irradiated with ultra-violet light, have the potential to increase in number upon exposure to broad-range light: that is natural light or internal electric lighting.

Therefore, the current composite sampling procedure is deficient in that the samples cannot be tested within six hours, and they are subject to internal electric light after collection. Using a grab sample method the sample can be tested instantly and is not subject to time delays and light, which induces increased faecal coliform growth.

Evidence supplied in the application indicates that composite faecal coliform results in most cases were 1 –2 orders of magnitude higher than the levels of faecal coliforms in the grab samples. The applicant states that *“this indicated a degree of regrowth of faecal coliform bacteria consistent with the literature references”*.

The condition limits for the grab sample are to stay the same. 90% of the daily grab samples shall not exceed 200 per 100 millilitres of water and not more than 10% of 90 consecutive samples shall exceed 950 per 100 millilitres.

I have assessed the variation of condition 7 and consider that there are no adverse effects over and above those already assessed in the original application WGN900025.

11.1 Source of Faecal Coliforms

Faecal coliforms are one form of bacteria found in faeces, and are plentiful in domestic wastewater. This bacteria may be from human, animal or vegetative matter. Their presence serves as an indicator of contamination in water.

Faecal coliforms are treated through a disinfectant and ultra violet light treatment at the Moa Point Wastewater Treatment Plant. This means they are treated to meet the limits identified in the consent conditions.

11.2 Impact of Faecal Coliforms

The bacteria may also breed in water, mud, sand, silt and seaweed. However, tidal flow, dilution and sunlight rapidly reduce the level after discharge into seawater.

The presence of faecal coliforms indicates that the life sustaining capacity of water is compromised. Pathogens associated with faecal coliform bacteria can make it unsuitable for stock drinking, recreational bathing, food gathering and public water supply.

The ANZECC safe level of faecal coliform for swimming is 150 faecal coliform organisms per 100 ml of water (minimum of five samples taken at regular intervals not exceeding one month, with four out of five samples containing less than 600 organisms per 100 ml of water).

12. Summary

The applicant states that *“the grab samples consistently show results well below those results from the composite samples over an extended period of time”*.

On the basis of the information and monitoring results provided to date, I consider it reasonable to change the faecal coliform sampling method to grab sampling and consider that there are no adverse effects over and above those already assessed in the original application WGN900025.

ANNETTE MCGOVERN
Resource Advisor, Consents Management

ROB FORLONG
Manager, Consents Management