31 August 2016

The Attorney General
Parliament Buildings
WELLINGTON

via email: c.finlayson@parliament.govt.nz

Dear Minister Finlayson

Water New Zealand Submission on the Draft Terms of Reference for the Government Inquiry into the Havelock North Water Supply Contamination Incident

Water New Zealand offers the following observations on the Draft Terms of Reference for the Government Inquiry into the Havelock North Water Supply Contamination Incident which were released on 22 August 2016.

Founded in 1958, Water New Zealand is a national not-for-profit sector organisation comprising approximately 1600 corporate and individual members and is the principal voice for the water sector in New Zealand. Core priorities for Water New Zealand are sector leadership and advocacy, promoting collaboration among participants across the three waters environment, and provision of technical guidance on aspects of 3 waters management.

Context and Background Understanding

The events at Havelock North have not occurred in a vacuum, but against a context of a developing strategy intended to prevent such an incident. Prior to 1990, New Zealand relied on guidelines prepared by the World Health Organisation to provide guidance for water suppliers and regulators on ensuring the quality of drinking-water supplies.

In 1991, contamination of the Waterloo reservoir in Lower Hutt prompted the development of a New Zealand-specific drinking-water strategy and the release in 1993 of the first public health grading criteria. In 1995, the first of a new generation of New Zealand-specific drinking-water standards was released. The need for this review was reinforced by the 1993 Milwaukee cryptosporidiosis incident, in which over 400,000 people were made ill and at least 104 died.

There have been three subsequent editions of the standards (2000, 2005, 2008) and a number of other ótoolsôthat today make up the strategy.

A drinking-water supply contamination event in Walkerton, Ontario, Canada in 2000, which resulted in seven deaths and thousands of cases of illness, caused water suppliers and regulators in the developed world to review and reconsider the approach taken to the provision of safe water supplies.

Subsequent to the Commission of Inquiry into the Walkerton event (which found failings in virtually every aspect of the provision, monitoring and regulation of Walkerton water supply), the World Health Organisation recommended change from a quality control approach in drinking-water supplies to one of quality assurance. This risk-based approach was outlined in the World Health Organisationôs *Guidelines for Drinking-water Quality Management*, released in 2004, and was quickly adopted into the New Zealand strategy.

The final tool in the New Zealand strategy was the passing, in spite of considerable opposition, of the Health (Drinking Water) Amendment Act in 2007. This law, amongst other things, required water suppliers to take a risk-based approach to the provision of drinking-water through the preparation of Water Safety Plans (at that time called Public Health Risk Management Plans) and to take all practicable steps to comply with the drinking-water standards.

The strategy was intended to prevent the events that occurred in Havelock North. There have also been other smaller water-borne outbreaks that have not been prevented by the strategy, including hundreds of cases of gastro-enteritis associated with the Darfield supply in 2013, and outbreaks at Cardrona and Mt Hutt ski fields in the mid-2000s.

In fact, evidence suggests that small outbreaks of disease associated with reticulated water supplies occur annually.

Response and Recommendations to the Draft Terms of Reference

In response to the release of the draft terms of reference, Water New Zealand convened a group of recognised industry professionals to discuss the terms of reference and contribute to the preparation of this submission.

We believe the inquiry should seek answers to the following four fundamental questions.

- What was the cause of the contamination of the Havelock North drinking-water supply and subsequent water-borne outbreak?
- Was the response to the incident by all concerned organisations timely and adequate?
- Why did the Havelock North event occur in spite of the considerable measures implemented in the New Zealand drinking-water industry since 1990 specifically to prevent such an incident?
- What measures could be taken, changes made or reviews undertaken to prevent the recurrence of a similar incident?

We believe that the current terms of reference are suitably broad but lack the precision required to suitably guide the inquiry. We suggest that the first two sections of the Terms of Reference are redrafted to focus on the above questions. We believe this would more clearly articulate the role of the inquiry without limiting its scope.

The Purpose of the Inquiry

We believe that the first purpose of the enquiry is to determine why the New Zealand drinking-water strategy has failed, on more than one occasion, with two overarching questions.

- Is the New Zealand Drinking Water Strategy fit for purpose?
- Has the New Zealand Drinking Water Strategy been effectively implemented?

The lack of precision in the draft terms of reference is highlighted in relation to this under the section *Matters upon or for which recommendations required*. Both points a. and c. refer to the drinking-water standards but really the points should refer to the drinking-water strategy, of which the standards are only one part - as it is investigation of the strategy as a whole that is required, not the standards alone.

We recommend that the Terms of Reference more clearly outline the need for the inquiry to review the adequacy of the key components of the strategy, specifically the requirements of the Health (Drinking Water) Amendment Act, the public health grading criteria and the

drinking-water standards. Obviously this will specifically consider the provisions in the standards relating to the use and risks of groundwater supplies as used at Havelock North.

Further to the overarching questions of the purpose of the enquiry, while we acknowledge that the Terms of Reference note that the inquiry will consider *whether the regulatory regime is operating effectively*, implementation of the strategy, including the regulatory regime, has long been a concern for Water New Zealand.

The inquiry will need to consider the level of expertise within the organisations responsible for the regulation of drinking-water supplies and the effectiveness of arrangements under which regulation has been delegated. This may be covered by clause c. of the Terms of Reference, but again it would be useful to the inquiry if it was more explicit.

Additional Recommendations on the Draft Terms of Reference

1. Training

Additionally, we consider that the terms of reference require reference to training, of water supply managers, operators and for regulators. While an industry-led review of training is currently beginning, it is important that the inquiry is given explicit authority to investigate the quality and appropriateness of the current training structures and material, including on-going professional development and the requirement for minimum qualification levels for water supply operators and managers.

2. Procurement and Engagement of Suppliers

It may also be useful for the inquiry to consider the relationship and arrangements under which local authorities and other water suppliers engage and use the services of consultants and service delivery contractors (outsourcing is a common industry practice).

3. Economic and Social Impacts

We consider that it would be useful for the inquiry to be given authority to investigate the economic and social impacts of the incident. These matters were a critical part of the Commission of Inquiry into the Walkerton incident and provided useful information on the costs and benefits of providing safe drinking water supplies.

Inquiry Representatives

Water New Zealand believes that the expertise of the inquiry team will be critical to the success of the investigation. It is essential that all of those appointed to the inquiry are independent of all the organisations that may be investigated and their professional advisors and any other organisations that may be linked to the Havelock North drinking-water supply or the events that transpired in August this year.

We consider that the following expertise may assist in achieving the purpose and answering the questions of the enquiry.

1. Epidemiology

We consider that the team will need the services of someone who is trained and experienced in epidemiology and the investigation of illness outbreaks, particularly those of a water-borne nature. The knowledge of such a person will be critical to assessing the response to the incident.

2. Potable Water

Water supply networks are ósystemsôinvolving not only the physical infrastructure but also the personnel, management, procedures and practices. The inquiry teams needs to include those with experience in every aspect of the design, operations and management of the

entire ósystemôand not be restricted to water treatment alone. Contamination of water supply networks can occur both from the source and within the distribution network.

Understanding the management of risks associated with water supply management in a political environment will be critical to the inquiry.

While it seems obvious that someone with an in-depth knowledge of the provision of potable water to communities should be included on the inquiry team, we point out that many water engineers specialise in water treatment.

Because the Havelock North water supply used groundwater without treatment, an in-depth knowledge of treatment processes may be of limited value to the investigation. The inquiry needs to have access to a hydrogeologist with knowledge of ground water processes, abstraction through groundwater bores, regional council processes and rules relevant to groundwater and other matters specific to the type of water source used. Obviously this would not exclude the need for someone with a wide knowledge of the provision of water supply, the risks associated with it and the asset management and funding mechanisms that councils use to manage and renew their infrastructure.

3. New Zealand Drinking-water Strategy

We also consider that because the New Zealand Drinking-water Strategy is at the centre of the provision of drinking-water for both water suppliers and regulators, the inquiry team would be well served by the inclusion of someone who has an in-depth understanding of the strategy, including all its parts, how they were intended to work and what were the expected outcomes of each. Specifically, this person should understand the risk-based approach that New Zealand adopted in the early 2000s, including the details of successive drinking-water standards, the preparation of water safety plans and how they were proposed to work, and how the regulatory framework functions.

Water New Zealand has access to a number of people who could suitably fulfill these requirements and would be available to provide the names of individuals if it would be of assistance.

Clearly as an industry leader and representative, Water New Zealandôs intention is to assist in the inquiry and believe our considered input in conjunction with other industry representative organisations, including Local Government New Zealand (LGNZ) and local authorities, will assist the inquiry to resolve the questions that the Havelock North drinking-water supply incident has raised.

Should you consider it useful to discuss any of the matters raised above, please donôt hesitate to contact me.

Regards

John Pfahlert
Chief Executive

cc: Minister of Health
via email: jonathan.coleman@parliament.govt.nz