Bulk Reservoir Level Control

1.0 Objective:

- To maintain reservoir levels within the limit of the customer supply agreement.

2.0 Purpose

- Reservoir levels are maintained at the prescribed levels to ensure water is available in an emergency.
- Defines testing requirements of instruments required to achieve accurate reservoir level control.

3.0 Responsibility

- The Team Leader, Plant Operations and Team Leader, Pipelines or nominated person shall be responsible for ensuring that this procedure is implemented.

4.0 Scope

- Applies to all reservoirs fed directly from the wholesale supply network (excluding private supply points).

5.0 Procedure

Low level alarms and start levels vary, dependent on the size and demand of the reservoir (and the proposed customer service agreement).

Reservoir levels are monitored via a pressure bulb in the reservoir connected to a pressure transducer or a pressure transducer connected directly to a supply from the bottom of the reservoir. These transducers are calibrated 0 percent to 110 percent, where 0- percent is reservoir empty and 100 percent is reservoir overflow.

The level transducers are calibrated five yearly by the electrical technicians or other qualified personnel and calibration results recorded in SAP.

There is a 24 hour on-call roster published, with copies at the territorial authorities and within Wellington Water. If a burst main is reported, a staff

member will inspect the site to assess if backup help is required. Wellington Water Pipelines Team staff members will be contacted and the pipework repaired. Outside contractors may be called in to assist Pipelines Team staff members if necessary.

The control philosophy for reservoirs filled via pumpsets or control valves is as follows:

All reservoirs have at least four control levels (some have an additional overflow probe (5):

(1) Low Level (typically 60 percent). Alarms are sent to the operations staff via the telemetry system.

(2) Start Level (typically 80 percent). Start signal is sent to the pumpset or control valve via telemetry system causing water to flow into the reservoir.

(3) Stop Level (typically 95 percent). Stop signal is sent to the pump set or control valve causing the flow into the reservoir to stop.

(4) High Level (typically 98 percent). Alarm sent to operations staff via the telemetry system.

(5) Reservoir Overflow (100 percent). Alarm sent to operations staff via telemetry system.