Simmonds & Bristow

Established 1965 ACN 010 252 418 Pty Ltd

After Flood Advice for your WTP

First and foremost, the relevant licensing authorities should be informed that the plant has undergone a major disruption and is unlikely to be producing water to the standards specified in the design specification and in accordance with statutory guidelines.

If the water treatment plant was not located adjacent to a river and has not been rendered completely inoperable, ensuring the safety of the water supply should be the primary responsibility. If the plant is considered to be inoperable, adequate public health warnings will need to be issued and alternative arrangements for the temporary supply of safe drinking water will need to be arranged.

Dalby Water Treatment Plant after 2011 Floods

If the plant has been inundated

- The electrical system should be checked and repaired if necessary.
- Pumps, blowers, etc will all need to be checked and replaced if unserviceable.
- Tanks, external pipes and valves and ancillary equipment should be checked for structural integrity and for silt or mud.
- Units should be cleaned if necessary.
- Process units should be thoroughly cleaned and checked before starting the system as water may have sat in the plant for an elongated period.
- Testing of water in storage tanks should be conducted as a priority. Test for Free Chlorine on site and for Bacteriological contamination.
- Also arrange to check free chlorine levels at various parts of the distribution network to assess whether the system has been contaminated and whether chlorine residuals are being maintained. Inadequate chlorine residuals or contamination will mean that the mains need to be flushed and possible disinfected. This can be done after the plant is producing potable water to the design specification.
- If the chlorine proves to be below 0.5-1mg/L in the tank a maintenance dose should be added to the tank to bring the concentration up to about 1mg/L.

- If the treatment plant may be operated it should be restarted.
- Raw water samples should be checked for quality (primarily turbidity) to assess what differences there were to before the event.
- At the outset, chemical dosing rates should be roughly doubled with Jar testing conducted soon after to re-assess suitable chemical dosage rates. This is important as it is likely the raw water quality has changed significantly.
- Production water should be checked for quality (microbiological, heavy metals, chlorine, suspended solids and turbidity), and if not compliant, should be discarded.
- Once compliant, and once the treated water reservoir has been disinfected, the water distribution network will need to be scoured and possibly swabbed to ensure that it is clean.
- Routine bacteriological testing will need to be conducted from several points throughout the reticulation system, from the point farthest from the plant, and at points of high use or high sensitivity (i.e. hospitals or clinics).
- Continue flushing and or disinfecting the system until full compliance has been restored.

If the plant has been unattended:

If the plant has just been unattended due to operators being unable to access the site, then it should be ok to bring it back online, however if there are any faults or problems with equipment these should be investigated.

Once the plant is fully functional, inform the relevant licensing authority and prepare a full incident report as required by the licence conditions.