

Government Operations

Preliminary Findings from HNTB Investigation of January 2025 Water Outage

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DEPARTMENT OF
**PUBLIC
UTILITIES**

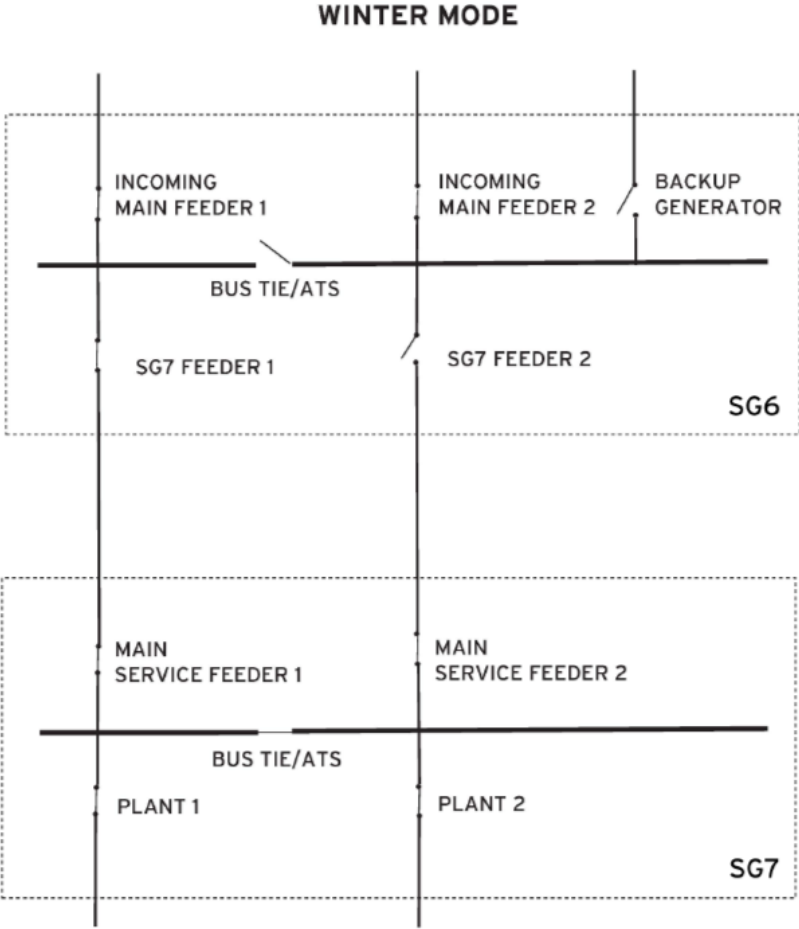
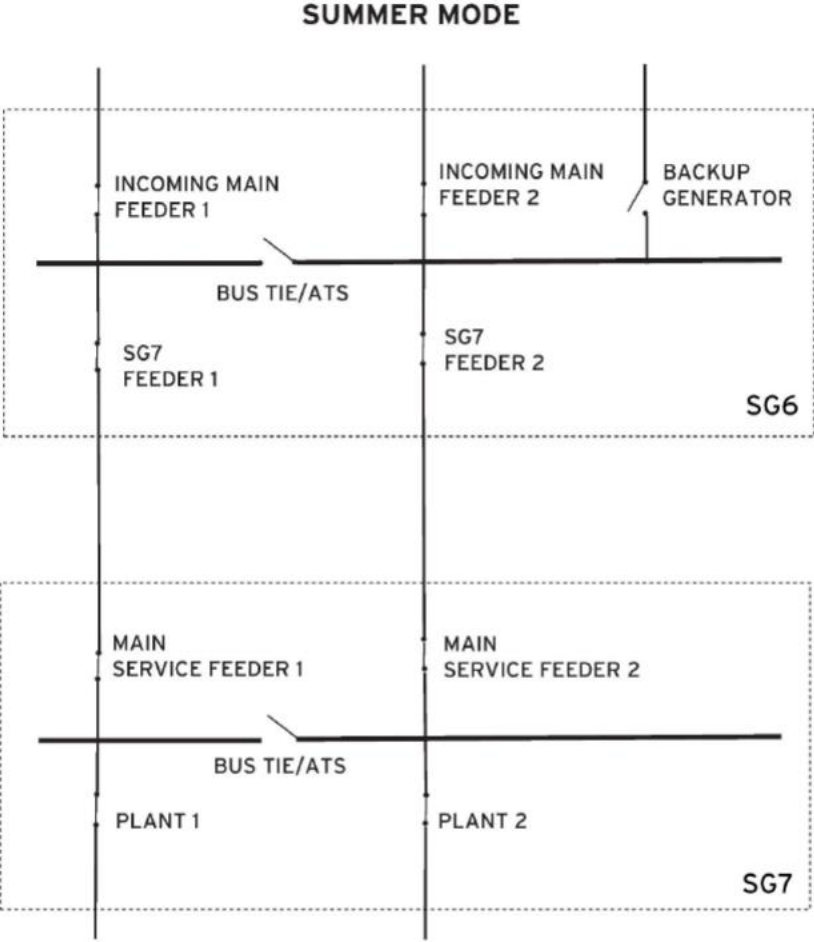
Findings

- WTP experienced complete loss of power.
- WTP was operating in “Winter Mode”.
- Bus Tie failed to transfer from the primary feed to secondary feed.
- Effluent valve UPS did not close the effluent valves.
- Diesel Pumps were used to dewater basement but could not overcome the flow.
- Basement flooding resulted in damage to equipment and WTP outage for nearly 36 hours.
- Typical staffing is three operators.
- Lack of established SOPs for routine or emergency operations.

Preliminary Recommendations

- Operate the WTP in “Summer Mode”
- Develop a Bus Tie failure plan
- Implement severe storm event response protocol
- Install filter effluent valve UPS with minimum runtime of one hour
- Install SCADA UPS with runtime of one hour
- Develop written SOPs for staff and routinely train staff
- Expand DPU Emergency Operations Manual to include more process specific actions
- Review staffing plans to increase staffing to four operators per shift
- Raise electrical systems above the basement where practical
- Provide an automatic transfer system for the existing back-up generator system

Summer Mode



Bus Tie Failure Plan

City of Richmond
Department of Public Utilities

BUS TIE FAILURE PLAN

Storm Response Protocol



UPSs



Standard Operating Procedures (SOP)s



Staffing



Electrical



Automatic Transfer System (ATS) for Back-up Generator System

