

Attack Identifier	Starting Time	Ending Time	Duration (minutes)	Attack description
1	9/10/17 19:25:00	9/10/17 19:50:16	25.16	Motorized valve 1_MV_001 is maliciously turned on, this causes an overflow on primary tank should reflect on 1LT001 and 1FIT001
2	10/10/17 10:24:10	10/10/17 10:34:00	9.50	Flow Indication Transmitter 1_FIT_001 is tuned off, a false reading is seen by PLC for 1_FIT_001. This will turn chemical dosing pump on while leaving the water level in primary tank constant. Consequently the attacker is increasing the level of chemicals inside water.
3-4	10/10/17 10:55:00	10/10/17 11:24:00	29.0	Stealthy attack. Attacker aims to drain elevated reservoir 2_LT_002. This is done controlling manipulating tank level draining and filling speed. 1_AIT_001 Moreover the attacker changes the reading seen by water quality sensor, this causes the raw water tank drain.
5	10/10/17 11:30:40	10/10/17 11:44:50	14.10	Turn off valves to consumers 2_MCV_101, 2_MCV_201, 2_MCV_301, 2_MCV_401, 2_MCV_501, 2_MCV_601 consumers will receive no more water.
6	10/10/17 13:39:30	10/10/17 13:50:40	11.10	Turn on maliciously 2_MCV_101, 2_MCV_201.
7	10/10/17 14:48:17	10/10/17 14:59:55	11.38	Supply contaminated water to the Elevated Reservoir tank by setting 1_AIT_002 to 6 to drain primary grid because of contamination. at the same time open 2_MV_003
8	10/10/17 17:40:00	10/10/17 17:49:40	9.40	Maliciously open 2_MCV_007 in order to produce water leakage before water reaches consumers. this attack should be reflected in 2PIT002 and 2FT002 (unsuccessful)
9	11/10/17 10:55:00	11/10/17 10:56:27	1.27	Turn on 1_P_006 maliciously to cause pipe burst.
10	11/10/17 11:17:54	11/10/17 11:31:20	14.26	Damage 1_MV_001 and raw water pump to drain Elevated Reservoir tank.
11	11/10/17 11:36:31	11/10/17 11:47:00	11.29	Similar to attack 8
12	11/10/17 11:59:00	11/10/17 12:05:00	6.0	Similar to attack 8
13	11/10/17 12:07:30	11/10/17 12:10:52	3.22	Reducing Booster set point pressure, this causes intermittent water supply to consumers this should be reflected in 2FIT003 and 2PIT003
14	11/10/17 12:16:00	11/10/17 12:25:36	9.36	stop chemical dosing to the raw water which is supplied to the primary grid tank tank
15	11/10/17 15:26:30	11/10/17 15:37:00	11.30	Stealthy attack, inverse of attack 3