	Wastewater Treatment	Reference: WwP/I/3006/30/01
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1. Safety

Any person carrying out any of the following instructions shall do so in accordance with Health and Safety Procedures and all Generic Risk Assessments (GRAs), details of which are available via the intranet site.

If in carrying out this instruction, it is not possible to rectify any problem encountered within a reasonable timescale, the Production Manager or senior equivalent person must be contacted.

All other applicable regulatory and statutory requirements shall be observed at all times. Detailed operating instructions, control philosophies and technical information may be found in the following;

- Process Loss Contingency Plans
- Compliance Action Plans
- Environmental Permits
- Accident, Incident and Emergency Management Plans
- Drainage Plans
- Environmental Risk Assessments
- O & M Manuals
- Control Philosophies


2. Responsibility

All Standard Operating Procedures, Instructions and other documented operational procedures and activities are to be carried out by the Process Controller or other trained person designated by the Production Manager.

If in carrying out the instruction, it is not possible to rectify any problem encountered within a reasonable timescale, the Production Manager or senior equivalent person must be contacted.

Any operational problem that cannot be dealt with by normal operational procedures shall be classed as an INCIDENT and the current issue of UU Incident Management Procedure shall be referred to and SOP WP.S/001 Incident Response.

All actions and communications carried out while applying any Standard Operating Procedure, Instruction or other documented operational procedure or activity shall be recorded using form WwP/F/001/31/08 Site Diary Log.

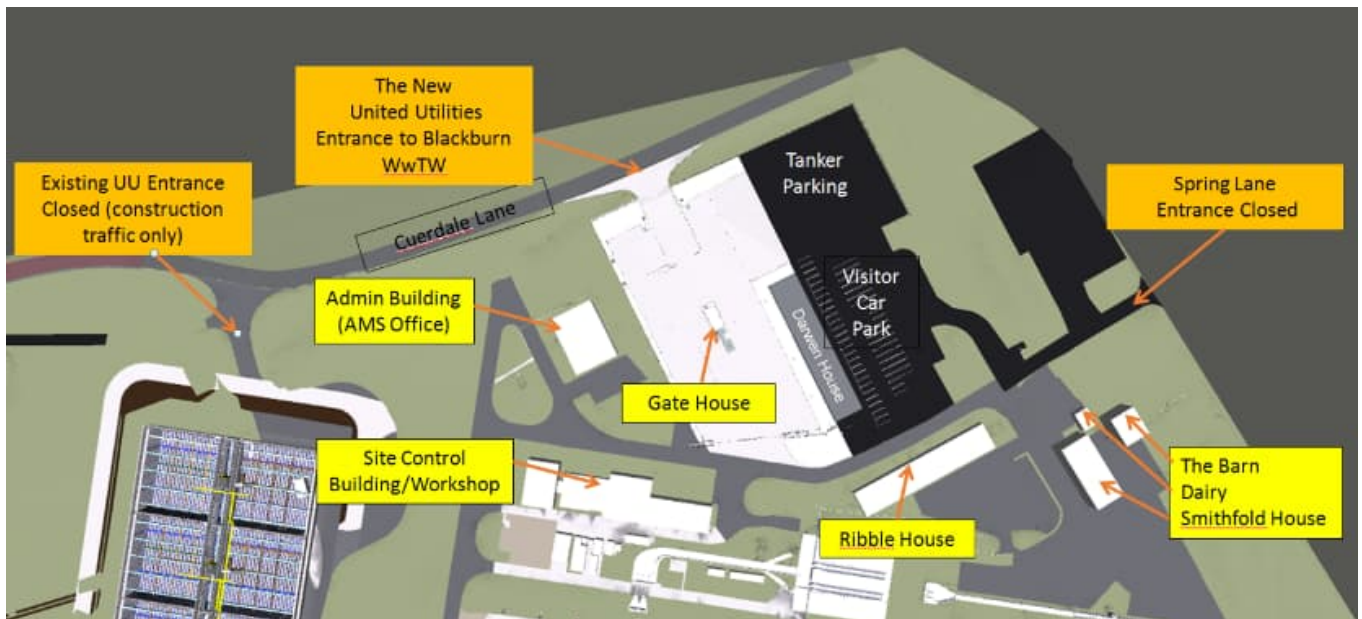
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3. Site Location and Access¹

Contacts

- United Utilities Integrated Control Centre Lingley Mere
- North Desk : 0345 072 6097
- Site Address: Blackburn WwTW, Cuerdale Lane, Samlesbury, Nr Preston, PR5 0UY
- Inlet Works, Spring Lane, Samlesbury, Nr Preston PR5 0UX
- Operations Area: Central
- Production Manager: Mark Nixon
- Process Controllers, Rob Jackson, Alan Evenson, Gary Mayell

Site Entrance Details




Directions

- Leave the M6 at junction 31. Follow the A59 Clitheroe Rd for 1 ½ miles turn right into Cuerdale Lane at the Swallow Hotel. Blackburn WwTW entrance is approximately 250 yards on the left

Local Access Instructions / Restrictions

- Grid Reference : SD 604 295

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- Past experience has proved that there are no local problems with generator access to the site. However before accessing site please contact on site Process Controllers to check for any temporary access problems
- During normal working hours (07.00 – 15.30hrs – 14.30hrs on a Friday) report to gatehouse. Outside normal working hours for the duration of the power failure the main gate will be left open and manned. Outside operational hours the side gates will need to be utilised for access and gates opened by hand

4. Power Loss¹


Initial Actions

- Contact Remote Monitoring Control (0345 072 6097) to update them on the status of the incident and to inform Environment Agency of power outage, also request adequate presence of Field Service Engineers for connection and operation of the generators. Contact ICC, and order Generators needed on site
- Arrange for sufficient Operations personnel to be present during the power outage to assist the FSE's and to monitor the plant and processes
- A general guide for manning levels is one FSE per generator and one member of Operations per generator

Generator Requirements

Generators are supplied by Genpower: 0845 6012187. Always request additional fuel supplies.

Generator Size (KVa)	Cable Length	Position on Site	Connection Details	Plant Supplied
500 KVA	30m (min)	SUB B ²	800A Switch. Connected at back of MCC .Turn of the Turbine	Admin Building
75 KVA	30m (min)	New Brewery ²	630A Gen Switch. Flap in panel	Screens at Whitbread, Clarifier desludge pumps
100KVA	30m (min)	Whitbread ²	800A Gen Switch Flap in Panel	To run supernatant pumps & prevent high level in supernatant pump well
300KVA	30m (min)	EEH Plant ³	800A Gen Switch. Term Box Outside	EEH Plant
300KVA	30m (min)	Press House ³	1600a Gen Switch Term Box Outside	G.B.T.s Poly makeup Plants

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Generator Size (KVA)	Cable Length	Position on Site	Connection Details	Plant Supplied
250KVA	30m (min)	Centrifuge ³	1250A Gen Switch. Term Box Outside	Centrifuges 1 and 2
500KVA	25m	Inlet Works ²		Screens, detritors etc.
500KVA	25m	UID Building ²		UID Tank & Pumps

¹Applicable to WwTW & IED Installation area

²Applicable to WwTW area only

³Applicable to IED Installation area only


Local Guidelines

- **Start-up procedure.** Ideally generators should be started and brought on line by a competent FSE and in accordance with operational needs. Following start up, check and monitor operation of the process plant
- **Re-fuelling.** Ensure sufficient fuel stocks and manpower to facilitate operation of the generators
- **Hazards caused by power failure.** Lack of site lighting and process alarms. Inlet woks flooding due to screens failure
- **Security.** Ensure the provision of adequate manpower for security of the site, process and to prevent theft and/or vandalism
- **Environmental considerations.** Ideally silenced generators should be used in order to reduce nuisance to our neighbours. Ensure that any flood lighting does not cause annoyance to neighbours
- **Additional information.** Refer to the procedure for dealing with a mains fail at Blackburn WwTW which includes generator requirements, location plan and directions to site. NB: Copy located in Blackburn Works Process Controllers office

Note

A standby generator is placed at the AB Inbev UK PTP first

- It should be noted that the AB Inbev UK PTP access road will be blocked by the Sub B generator
- Please ensure that the Inbev UK PTP generator is in situ before positioning the Sub B generator

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5. Biological Loss²

Assumptions

- Bio-mass has been killed off possibly due to an illegal toxic discharge
- The initial checks / actions in "Biological Loss Contingency Planning" have been completed and it has been decided to tanker in bio-mass from another works

Immediate Actions

- Start Incident Log and take sample for analysis
- Contact Remote Monitoring Control Tel 0345 072 6097
- Contact Trade Effluent (via ICC) if thought to be a high toxic discharge

Do toxicity analysis on incoming sewage in waste reception lab.

Consider

- Effect on local digestion plants
- Whether still entering the works
- Effect on watercourse
- Duration and extent of toxic effect
- Monitor effect on BOD and Ammonia removal
- Contact TE concerning high toxic levels

General Considerations


Consider

- Duration and source of increased tankering operation - Contact Environmental Services via the AMC
- Site manning levels (shift work)

Emergency Contact No's:

Tankers

- Environmental Services, Manager – Via ICC 0345 072 6097

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Pumps

- Selwood: 0151 420 6585
- (Out of hours an answer phone service will operate giving a list of emergency contact no's.)

6. Flow Loss²

Cause of Flow Loss

- Sewer blockage / collapse (Main inlet sewer)

Action

- Contact Waste Water Network Controller (via ICC) for any information they may have regarding the loss of flow
- Inspect the inlet area to see if the blockage / collapse is visible
- Liaise with Network Controller / District Manager to locate blockage / collapse and instigate repair work

Cause of Flow Loss

- Modulating penstock failure (FTW)


Action

- If power is lost to whole site, contact Electricity North West to determine estimated duration of power outage
- Instigate "Quality Works" power loss plan if appropriate
- If power loss is local to process area, contact electrical FSE to locate fault
- If the penstocks have failed in the closed position, they can be manually opened, by unlocking the lock. You can then open the penstock with the hand wheel
- If the penstocks fail in the open position and need to be adjusted to limit flow to the works, they can be manually closed, by locking the hand wheel using the lever located underneath. You can then turn the hand wheel clockwise to close the penstock

Cause of Flow Loss

- Screen failure

Action

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- If power is lost to whole site, contact Electricity North West to determine estimated duration of power outage
- Instigate "Quality Works" power loss plan if appropriate
- If power loss is local to process area, contact electrical FSE to locate fault
- The inlet and outlet penstocks to each screen can be manually opened, by locking the hand wheel, using the lever located underneath. You can then turn the hand wheel anticlockwise to open the penstock
- The screens cannot be operated without power but will allow flow to pass through them until the holes in the screen become blinded
- In the event of total power failure, open the emergency bypass penstocks, which are located in front & behind the screens

Causes of Flow Loss

- Power loss

Action

- Loss of flow to the works would be due mainly to power loss. This would affect inlet works modulating penstocks A and B and the inlet screens
- Refer to modulating penstock failure and screen failure for actions

Out of Hours

- For out of hours emergencies contact the Remote Monitoring Control for standby process controller, FSE and emergency numbers

7. Contacts

- Blackburn District Council: 01254 585 669
- Lancashire County Council: 0845 053 0000
- South Ribble Council: 01772 625 499
- Electricity North West: 0800 195 4141
- Environment Agency: 0845 850 3518
- Remote Monitoring Control: 0345 072 6097

For United Utilities personnel, PCs, FSEs, District Manager, Catchment Manager etc. Contact Remote Monitoring Control.