

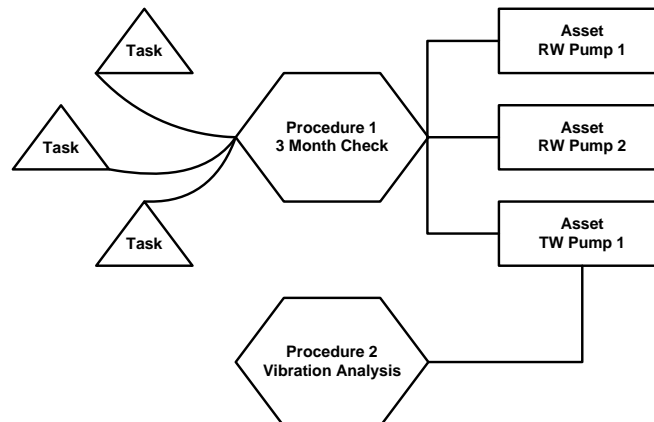
AI-07-MAINTENANCE PROCEDURES UPLOADING

Ver.1 Date: October 2014

1. SCOPE

This specification details the information required and format for Watercare Services Limited to add the maintenance tasks and procedures for new or replaced assets.

2. PROCEDURE STRUCTURE



A procedure is a list of maintenance tasks to be performed on a single asset.

A procedure can be triggered by calendar or hours.

Any given procedure can be linked to many assets within the same cost centre.

Costs are recorded against the asset.

There is one spreadsheet to be filled in:

- Maintenance Procedures Upload Sheet.

These are held in the *Completion and Handover* section of the PDM, linked to *Handover Requirements*

See Examples below in section 4

3. FIELDS USED TO IDENTIFY TASKS AND PROCEDURES

Note that the number of characters (including spaces) available in each field is indicated in brackets by the field headings on the spreadsheets. Data strings entered into a field must not contain more than the number of characters indicated.

All entered data must be in capital letters (Task notes can be lower case)

Fields shown shaded in blue on the spreadsheet will be filled in by Watercare. The consultant or contractor is required to fill in the remaining fields shaded in green. These are listed below.

3.1 PROCEDURE ID

Procedure IDs are up to eight characters long and are in the form:

Where: Water Treatment / Networks

W = Water
 T = Tuakau (Indicates location)
 M = M (Mechanical), E (Electrical), C (Civil), I (Instrument)
 TWP = Identifies the type of asset, in this case
 TWP for Treated Water Pump
 01 = Procedure 1 of 99
 = WTMTWP01

Where: Wastewater Reticulation

R = Wastewater Reticulation
 N = Network (Indicates location)
 M = M (Mechanical), E (Electrical), C (Civil), I (Instrument)
 ARV = Identifies the type of asset, in this case
 ARV for Air Release Valve
 01 = Procedure 1 of 99
 = RNMARV01

Where: Wastewater Treatment Plant

T = Water (R = Wastewater Reticulation)
 M = M (Mechanical), E (Electrical), C (Civil), I (Instrument)
 SPU = Identifies the type of asset, in this case
 SPU for Submersible Pump
 01 = Procedure 1 of 99
 = TMSPU01

3.2 DISCIPLINE

This will be mechanical, electrical, instrumentation, Civil, Operations etc.

3.3 SEQUENCE

This is used to distinguish superseding procedures which have the same procedure ID. You can leave this blank when entering a one off procedure which will not supersede any other, Sequence 0 is then assumed. To add a superseding procedure, you must enter a sequence number (1-99).

Interval based maintenance

- 0 Default for a one off procedure
- 1 Monthly
- 3 3 Monthly
- 6 6 Monthly
- 12 12 Monthly
- 24 24 Monthly
- 36 36 Monthly
- 60 60 Monthly
- 72 72 Monthly (may help with nesting)

The combination of Procedure ID and Sequence uniquely identifies a procedure e.g.

- WTMTWP01 – 6 could be the 6 monthly mechanical procedure No.1 on the Tuakau Treated Water Pumps
- WTETWP01 – 12 could be the 12 monthly electrical procedure No.1 on the Tuakau Treated Water Pumps
- WTETWP02 – 12 could be the 12 monthly electrical procedure No.2 on the Tuakau Treated Water Pumps

3.4 DURATION

Length of time required to carry out task.

3.5 FREQUENCY

This is the frequency at which the maintenance should be carried out.

Enter the maintenance frequency in the form:

- 01W Weekly
- 01M Monthly
- 03M Three Monthly
- 06M Six Monthly
- 36M Three Yearly

Maintenance for equipment operating regular hours each month can be initiated on a weekly/monthly basis.

Note to enable the superseding of schedules, combine the one monthly tasks with the three monthly tasks to create a three monthly schedule and then the three monthly with the six monthly to create a six monthly schedule.

For run hours based maintenance leave the cell blank.

3.6 PROCEDURE – SHORT NAME

This field is limited to 30 characters and should provide a short description of the procedure including the frequency what the check is and the asset e.g. 1M Mech Chk Alfriston P/S

3.7 PROCEDURE – FULL DESCRIPTION

This field can be up to 250 characters long and should provide a full description of the procedure including the frequency what the check is and the asset e.g. One Monthly mechanical check – Alfriston Pump Station. The procedure is for an asset.

3.8 WORK CENTRE

This field will be generated when the assets are uploaded into Mosaic.

3.9 ASSET ID AND TASK NO

The asset ID will be generated when the asset is uploaded in mosaic. The task no starts at 1 and a new number is assigned to each new task for that procedure. There is no limit on the number of tasks within a procedure.

3.10 SCHEDULE DATE

This is the first day of operation of the system and is used to schedule the maintenance rounds.

3.11 TASK DESCRIPTION

This field is limited to 40 characters and hence should be a short description of the task e.g. coupling check.

3.12 TASK NUMBER

This is an additional task number required by Mosaic to allow work orders to be generated and printed out for the field technicians. The task number should start at the letter A to differentiate from the previous task number.

3.13 TASK NOTE DESCRIPTION

This is the detailed description of the task to be undertaken e.g. check condition of coupling and coupling pins. Where appropriate the relevant section of the original manufacturer's manual may be referenced.

3.14 COMMISSION DATE

This is the date the asset was handed over to Operations.

3.15 WARRANTY PERIOD -- COMMENT

This field shall include the length of the warranty period or defects liability period and specific instructions.

3.16 WARRANTY EXPIRY DATE

The date the warranty period or defects liability period ends.

000.1. EXAMPLES

UPLOAD CHECKS	PR	PROCEDURE ID (8 Characters)	DISCIPLINE	SEQUENCE	DURATION (hrs)	FREQUENCY (MTH)	PROCEDURE - SHORT NAME (30 character Max)	PROCEDURE FULL DESCRIPTION	REASON CODE	RESPONSIBILITY	BUDGET JOB	WORK CENTRE	R/S FLAG	ASSET ID & TASK NUMBER	SCHEDULE DATE (DDMMYYYY)	LOCATION	TASK DESCRIPTION (45 Characters)	TASK NUMBER	TASK NOTE DESCRIPTION	Commission Date	Warranty period : comments	Warranty Expiry Date
Example 1. Complete details for columns coloured green																						
P	WPAL18H		M	1	2	01M	1 M MECH CHK ALFRISTON PIS	ONE MONTHLY MECHANICAL CHECK - ALFRISTON PUMP STATION	WP	WMS	WPAPP1M	WORK		22025			ISOLATE EQUIPMENT	A	Ensure WSL isolation procedure is followed before work commences	16/11/2008	1 year Warranty period - must use OEM recommended lubrication as per task notes	16/11/2009
		(Refer to WSL - Procedure naming convention)												1			COUPLING CHECK	B	Check condition of coupling and coupling pins			
														2			COUPLING GUARD CHECK	C	Check condition of coupling guard			
														3			MECHANICAL SEAL CHECK	D	Check for leakage from mechanical seal - Check operation of flushing line			
														4			MOUNTING BASE CHECK	E	Check condition of mounting base - check hold down bolts are tight			
														5			PROTECTION SHIELDS CHECK	F	Check condition of all seal protection shields/ Flange splash covers			
														6			LABEL CHECKS	G	Check Equipment ID labels are correct, secure and legible			
														7			MANUAL OPERATION CHECK	H	Operate Pump in manual control - Check for vibration and noise			
														8			LUBRICATION CHECK	I	Lubricate pump bearings - Use: Mobil SHC 220 - Quantity = 30 grams			
														9								
Example 2. To enable superseding of schedules combine the 1 Monthly tasks with the additional 3 Monthly tasks to create a 3 Monthly schedule.																						
P	WPAL18H		M	3	4	03M	3 M MECH CHK ALFRISTON PIS	THREE MONTHLY MECHANICAL CHECK - ALFRISTON PUMP STATION	WP	WMS	WPAPP1M	WORK		22025			ISOLATE EQUIPMENT	A	Ensure WSL isolation procedure is followed before work commences			
														1			COUPLING CHECK	B	Check condition of coupling and coupling pins			
														2			COUPLING GUARD CHECK	C	Check condition of coupling guard			
														3			MECHANICAL SEAL CHECK	D	Check for leakage from mechanical seal - Check operation of flushing line			
														4			MOUNTING BASE CHECK	E	Check condition of mounting base - check hold down bolts are tight			
														5			PROTECTION SHIELDS CHECK	F	Check condition of all seal protection shields/ Flange splash covers			
														6			LABEL CHECKS	G	Check Equipment ID labels are correct, secure and legible			
														7			PIPEWORK CHECK	H	Check condition of pipework, supports and flange joints			
														8			LIFTING EQUIPMENT CHECK	I	Check operation of chain block - lubricate as required			
														9			AIR RELEASE CHECK	J	Check operation of air release valve discharging			
														10			MANUAL OPERATION CHECK	K	Operate Pump in manual control - Check for vibration and noise			
														11			LUBRICATION CHECK	L	Lubricate pump bearings - Use: Mobil SHC 220 - Quantity = 30 grams			
														12								