



TITLE: GENERATOR SET OPERATING PROCEDURE

Date of Revision:
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I. OBJECTIVE

This procedure provides the guideline on how to perform manual switching of power supply from local power provider to standby during power interruption or irregular power supply.

II. SCOPE

This activity is applicable for manual switching during power interruption or irregular power supply of all Pumping Stations of CITY OF KORONADAL WATER DISTRICT.

III. DEFINITION OF TERMS

- a. Standby Power Generating Set - It is a combination of diesel engine and alternator to serve as emergency power supply.
- b. Local Power Supply - It is the amount of voltage from the commercial power and is measured after the motor controller.
- c. Current on the load side - It is the amount of current (in amperes) measured from the line after the controller going to the submersible motor.
- d. Voltage on the load side - It is the amount of voltage from the commercial power and is measured after the motor controller.
- e. Manual Transfer Switch (MTS) - It allows the owner to startup a generator and restores power to pre-designated critical circuits when utility power is not available.
- f. Pump Operator (PO) - In-charged to operate Pumping Stations of CITY OF KORONADAL WATER DISTRICT.
- g. Big Tank - It is the Reservoir Watchman / Security Guard on duty receiving reports and complaints that are based in the CKWD Estember Reservoir.

IV. REFERENCE DOCUMENTS

- a. Operation and Maintenance Manual (LWUA)
- b. Manufacturer's Manual

V. RESPONSIBILITY AND AUTHORITY

- a. The Plant Equipment C (PEC) shall be responsible in monitoring of the following:
 - i. Check and evaluate all parameters of the Generator upon receipt of the report if meets the minimum requirement.
 - ii. Monitor the running time of all generators to ensure proper implementation of preventive maintenance.
- b. The Pump Operators shall be responsible of the following:
 - i. Start and shut-off the generating set.
 - ii. Start-up and shut-off the submersible pump and motor.
 - iii. Monitor all parameters of the generator and the submersible pump and motor during operation.
 - iv. Prepare Daily Pumping Performance Monitoring Report.



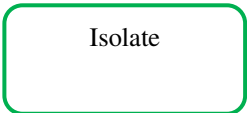




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VI. PROCEDURE DETAILS

a. Manual Switching Procedure during Power Interruption.

FLOWCHART	DETAILS	RESPONSIBILITY	RECORDS
 Start			
 Communicate	Shall contact the Big Tank and inform about the power interruption or failure and record.	Pump Operator	Logbook
 Isolate	Shall turn the Main Breaker to "Off" position. Shall turn the MTS' Local power provider breaker to "Off" position Shall turn the main breaker of the motor control panel to "Off" position.	Pump Operator	Logbook
 Genset Start-up	Shall start the generator set after 10 minutes elapse time of power failure. Shall check the parameters of the Genset on panel board if it meets our requirement. <i>Note: If not, contact PEC</i> Shall turn the Genset Breaker, MTS' Generator Breaker, and Motor Control Panel Breaker to "On" position.	Pump Operator	Logbook / Daily Pumping Performance Monitoring Record
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	Shall press the "Start Button" on the motor control panel board.	Pump Operator	Daily Pumping Performance Monitoring Record
	Shall conduct the monitoring, recording of the following Submersible pump and motor parameters: <ul style="list-style-type: none"> • Voltage, Current, Flowrate, Pressure. • Level of water at ground reservoir or elevated steel tanks. Shall monitor and record the following genset parameters: <ul style="list-style-type: none"> • Voltage, Amperes • Fuel at base tank • Lubricating oil temperature and pressure. 	Pump Operator	Daily Pumping Performance Monitoring Record

b. Manual Switching Procedure during Return of Power.

FLOWCHART	DETAILS	RESPONSIBILITY	RECORDS
	Shall contact the Big Tank and inform about the return of power supply from local power provider and record.	Pump Operator	Logbook



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	Shall press the "Stop Button" on the motor control panel board.	Pump Operator	Daily Pumping Performance Monitoring Record
	Shall stop the generator set after 5 minutes elapse time of stopping sub. Pump and motor. Shall turn the Genset Breaker, MTS' Generator Breaker, and Motor Control Panel Breaker to "Off" Position.	Pump Operator	Logbook / Daily Pumping Performance Monitoring Record
	Shall turn the Main Breaker to "On" position.	Pump Operator	Logbook
	Shall press the "Start Button" on the motor control panel board.	Pump Operator	Daily Pumping Performance Monitoring Record
	Shall conduct the monitoring, recording of the following Submersible pump and motor parameters: <ul style="list-style-type: none"> • Voltage, Current, Flowrate, Pressure. • Level of water at ground reservoir or elevated steel tanks. Note: Any unusual observation, contact PEC.	Pump Operator	Daily Pumping Performance Monitoring Record



Republic of the Philippines
City of Koronadal Water District

Block I, Casa Subd., Zone III,
City of Koronadal, South Cotabato

DOC ID No.:
CKWD-QP-PWRD-002

Date of Issuance:
02-03-2017

Division/Section:
**Planning & Water
Resources Division**

Revision No.:
0

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c. Reports

Reports	Frequency	Responsible
Daily Pumping Performance Monitoring Record	Monthly	Pump Operator
Production Summary Report	Monthly	Pump Operator
Production Report	Monthly	Supervising Engineer

I. PERFORMANCE INDICATORS

- a. Availability of water supply 24/7.

II. ATTACHMENTS AND FORMS

- a. Daily Pumping Performance Monitoring Record
b. Monthly Production Summary Report

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