Meter Accuracy Evaluation (Batch)



Metropolitan Cebu Water District Quality Management System Procedures Manual		Index No.	OP-	MMN-005
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Section		Revisi	on No.	0
Subject	Meter Accuracy Evaluation (Batch)	Effectiv	e Date	Jan. 01,01

1.0 OBJECTIVE:

A procedure to determine replaceability of water meter for preventive maintenance.

2.0 SCOPE:

From meter identification to testing and decision to replace or not.

3.0 DEFINITION OF TERMS:

JO

Job Order for meter replacement

Meter List

Is a list of water meters, installed in the filed, that are identified for preventive maintenance.

MMD

Meter Maintenance Division Manager

MSSD

Maintenance Support Services Department

PIT

Precision Instrument Technician

PM Program

Preventive Maintenance Program

WMMB

Water Maintenance Man - B

DATE:

Prepared: Juan Antonio J. Martinez

Date:

Date:

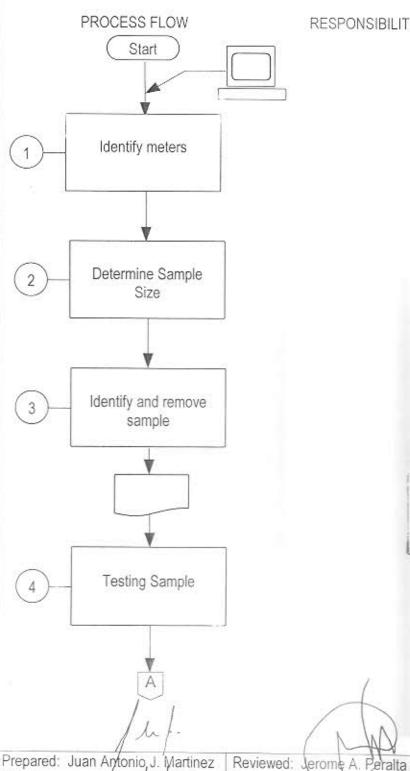
Reviewed: Jerome A. Peralta

Approved: Adoracion B. Rodit

Date: 7/20/07



Metropolitan Cebu Water District Quality Management System		Index No.	OP-MMN-005
		Page No.	2 of 3
Procedures Manual	Issue No.	1	
Section		Revision No.	0
Subject	Meter Accuracy Evaluation (Batch)	Effective Date	Jan. 01,01



RESPONSIBILITY

DETAILS / REFERENCES

1. In computer database, identify and pick-out the water meters that has been used for at least seven (7) years.

Sample size is calculated to be one(1) percent of the total number of meters that were identified. The number sample is spread proportionately to the number per zone.

3. Sample (Meters) will be identified and such shall be field tested for accuracy. Concessionaire to be informed of the test.



Sample (Meter) shall be tested for accuracy at the field. The following accuracy range are used as basis; Max Flow = ± 4 %

Intermediate Flow = ± 4 %

Minimun Flow = ± 20 %

Refer to field testing procedure.

Each meters accuracy reading in 3

flows, shall/be recorded.

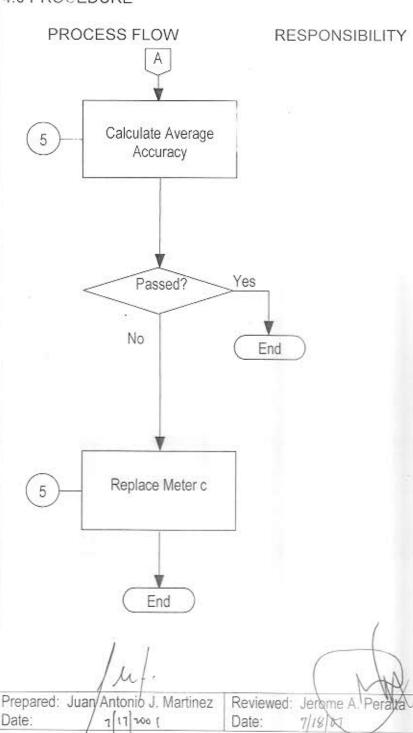
Approved: Adoracion B. Rodil 7/20/07 Date:

7/17/2001

Date:



Metropolitan Cebu Water District Quality Management System Procedures Manual		Index No.	OP-MMN-005
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Section		Revision No	0.
Subject	Meter Accuracy Evaluation (Batch)	Effective Date	e Jan. 01,01



DETAILS/REFERENCES

Maximum flow and intermediate flow shall be averaged.

If YES, All meters identified at process1 will be allowed one (1) year of use.

If NO, All meters identified at process 1 will be subject for replacement.

Subject meters to be replaced.

DATE:

Date:

Approved: Adoracion B. Rodil 7/21/01 Date:



Metropolitan Cebu Water District		Index No.	OP-	MMN-006
Quality Management System		Page No.		1 Of 5
	Procedures Manual	Issu	ue No.	1
Section		Revisio	on No.	0
Subject	Meter Replacement From MAC (C.M.)	Effective	e Date	Jan. 01,01

1.0 OBJECTIVE:

A procedure for the replacement of water meters under corrective maintenance.

2.0 SCOPE:

JO

Job orders from MAC up to the actual replacement of water meters (1/2" to 8") to submission of accomplished Job order to MAC.

3.0 DEFINITION OF TERMS:

MAC - MCWD Action Center.

MMDC - Meter Maintenance Division plumber assigned as Clerk..

MMDM - Meter Maintenance Division Manager.

MMD – Meter Maintenance Division.

Meter Replacement Job Orders.

PITC - Precision Instrument Technician Chief.

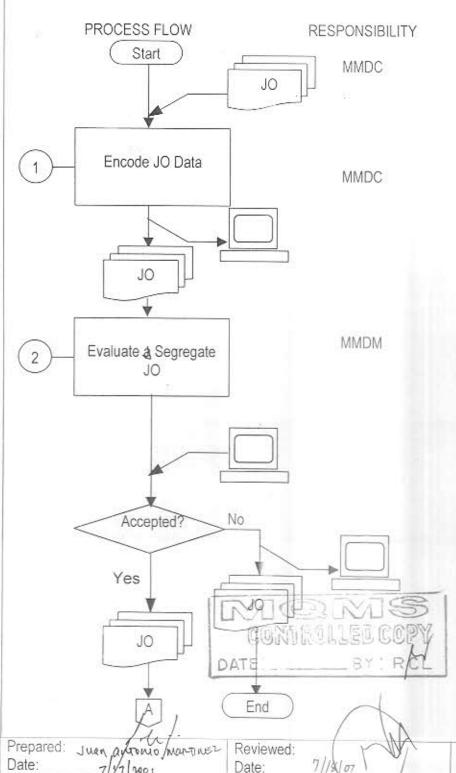
Prepared Date: 7/17/01

Reviewed: Date: 7/19/4 Approved: 7/20/07

DATE



	Metropolitan Cebu Water District		OP-MMN-006
Quality Management System		Page No	o. 2 Of 5
	Procedures Manual	Issue No	o. 1
Section		Revision No	o. 0
Subject	Meter Replacement From MAC (C.M.)	Effective Da	te Jan. 01,01



DETAILS / REFERENCES

JO from MAC to be picked up from MAC office, picked up time is before 8:00 A.M.

- Encode to MMD computer this following data:
 - Code number of concessionaire
 - Reason for request of replacement Ex. Broken Glass, Stolen, etc.
 - c. Job order number

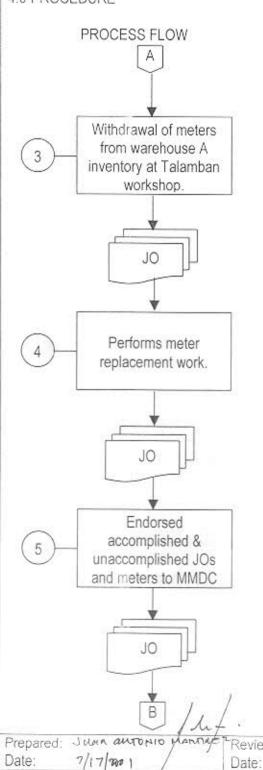
2. Evaluation

- Acceptability & completeness of sketches
- Completeness of trace-up reports attached at JO for JOs from Meter Readers.
- c. Double JOs.
- Incomplete/confusing data's.
- 2.1 Segregate JO between the meter replacement teams.
 If No:
- Annotate reason for rejection in JO by MMDM.
- MMDC to encode reason a date of rejection to MMD Computer by MMDC.
- MMDC to make list of rejected JOs in band paper for MAC signature of acceptance for returned JOs.
- List will filed by MMDC.

Approved: 7/20/07



Metropolitan Cebu Water District Quality Management System Procedures Manual		Index No.	OP-MMN-006
		Page No	. 3 Of 5
		Issue No	. 1
Section		Revision No	. 0
Subject	Meter Replacement From MAC (C.M.)	Effective Date	a Jan. 01,01



RESPONSIBILITY

DETAILS / REFERENCES

Lead man replacement team / warehouse A inventory Clerk Talamban

3. See appropriate procedure from warehouse A Inventory.

Lead man / meter replacement team

4. See meter replacement procedure #



Lead man

- 5. Accomplished JOs with replaced meters are endorsed to MMDC.
- 5.1 Unaccomplished JOs are annotated reasons for unaccomplishment, unused meters are also endorsed to MMDC.

Reviewed:

4118/07

Approved: Date:

Section Subject

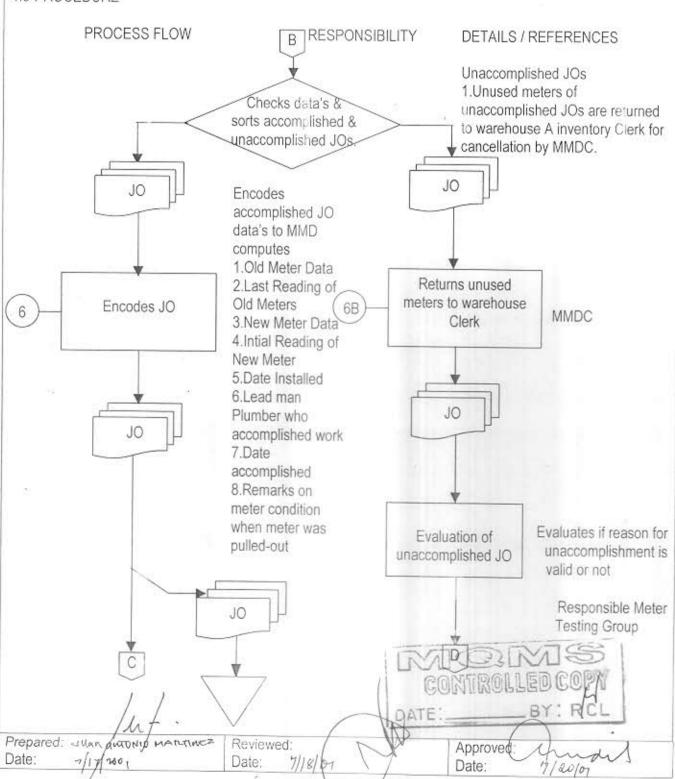


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Meter Replacement From MAC (C.M.)	Effective Date	Jan. 01.01

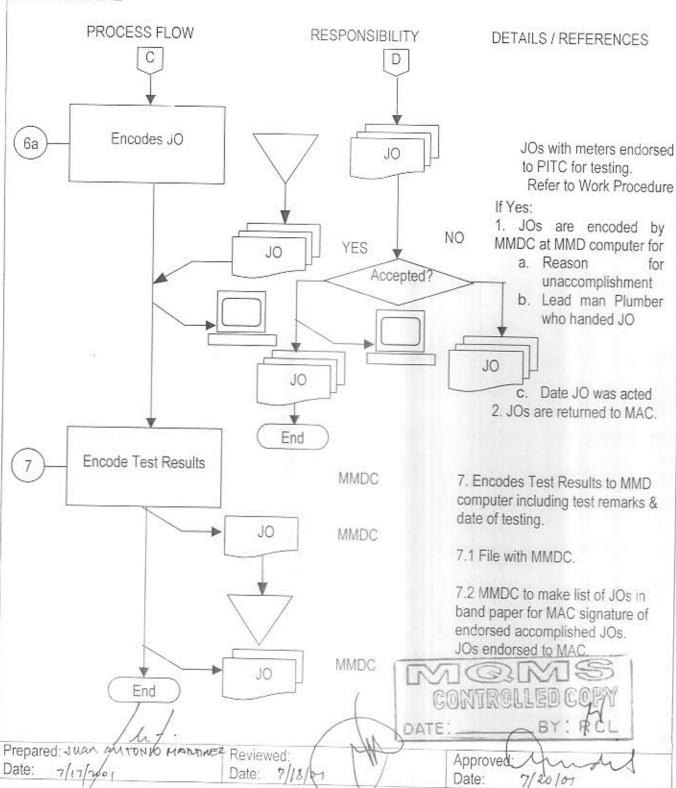
OP-MMN-006

4.0 PROCEDURE





Metropolitan Cebu Water District Quality Management System Procedures Manual		Index No.	OP-MMN-006
		Page No.	5 Of 5
		Issue No.	1
Section		Revision No.	0
Subject	Meter Replacement From MAC (C.M.)	Effective Date	Jan. 01.01





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		Page No. 1 Issue No.		1 of 4
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Section		Revision	on No.	0
Subject	Request for Trace-up	Effective Date Jan. 0		Jan. 01,01

1.0 OBJECTIVE:

To established a procedure to carry-out request for trace-up coming from MAC.

2.0 SCOPE:

From J.O. coming from MAC to actual trace-up to returning accomplishment J.O. to MAC.

3.0 DEFINITION OF TERMS:

JO Job Order requesting for trace-up of high consumption

MAC - MCWD Action Center

MMD - Meter Maintenance Division

WMMB - Water Maintenance Man B

MNDC - Meter Maintenance Division Plumbers assigned as clerk.

DATE :_

Prepared: Juan Antonio J. Martinez

Date:

Reviewed: Jerome A. Peralta

Date:

Approved: Adoracion B. Rodil Date: 7/20/07

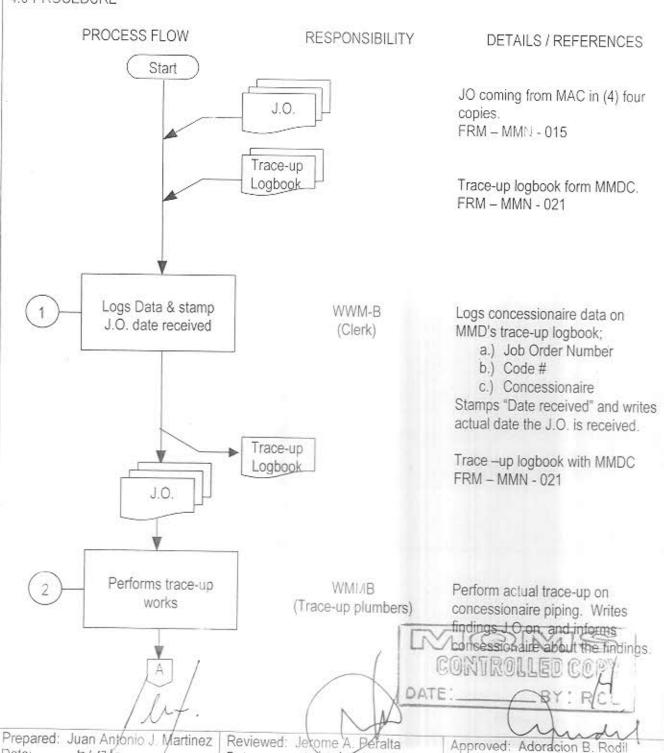


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Subject	Request for Trace-up	Effective Da	te Jan. 01,01

Date:

7/17/07

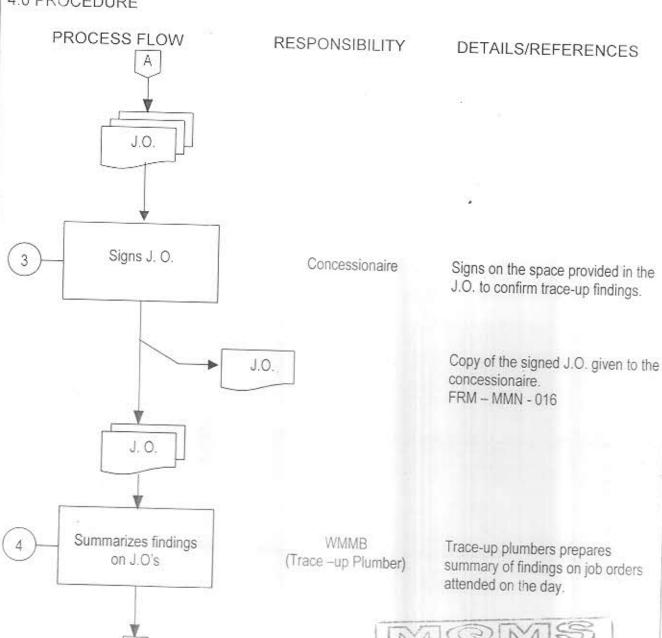
Date:



7/20/09



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Quality Management System	Page N	lo.	3 of 4	
Procedures Manual		Issue N	lo.	1
Section		Revision N	0.	0
Subject	Request for Trace-up	Effective Da	ite	Jan. 01.01



Prepared: Juan Antonio J. Martinez

Date: 7/17/201 Date:

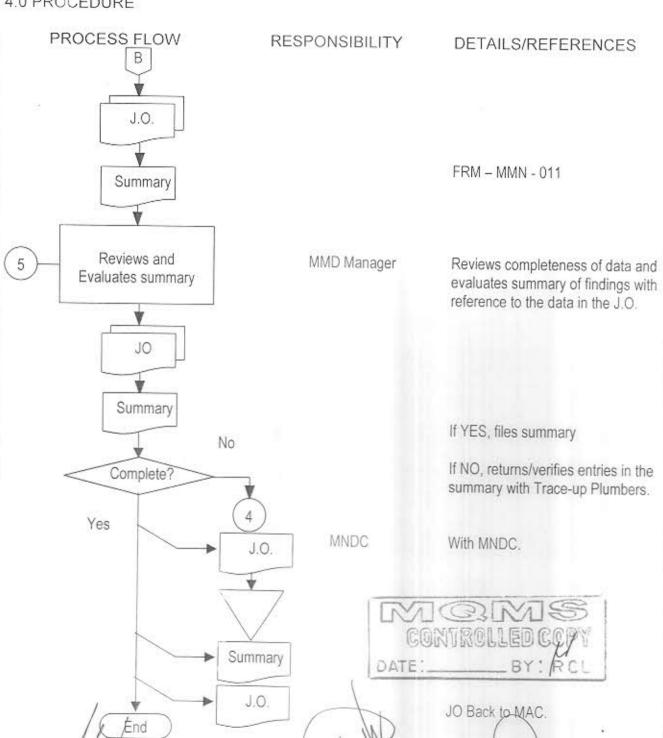
Reviewed: Jerome A. Peralta

DATE:___

Approved: Adoracion B. Rodi Date: 7/20/00



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		Issue N	0. 1
Section		Revision N	0. 0
Subject	Request for Trace-up	Effective Da	te Jan. 01.01



Prepared: Juan Antonio J. Martinez Date:

Reviewed: Jerome A Peralta Date:

Approved: Adoracion B. Rodil 7/20/07 Date:

Water Levy Meters Installation



Metropolitan Cebu Water District		Index No.	OP-	MMN-008
Qua	Quality Management System		Page No.	
Procedures Manual		Issue No.		1
Section	Meter Maintenance	Revision	on No.	0
Subject	Water Levy Meter Installation (New)	· Effective	e Date	Jan. 01,01

1.0 OBJECTIVE:

A procedure in installing water meters in private wells for water levy.

2.0 SCOPE:

From receipt of Job Orders from EWRD to actual meter installation to submission of JO back to EWRD.

3.0 DEFINITION OF TERMS:

EWRD - Environment and Water Resources Department.

MMDC - Meter Maintenance Plumber assigned as clerk.

JO Job Order.

LMTL - Large Meter Team Leader.

MMDM - Meter Maintenance Division Manager.

DATEL

Prepared: Juan Antonio J. Martinez Date:

Reviewed: Jerome A. Peralta

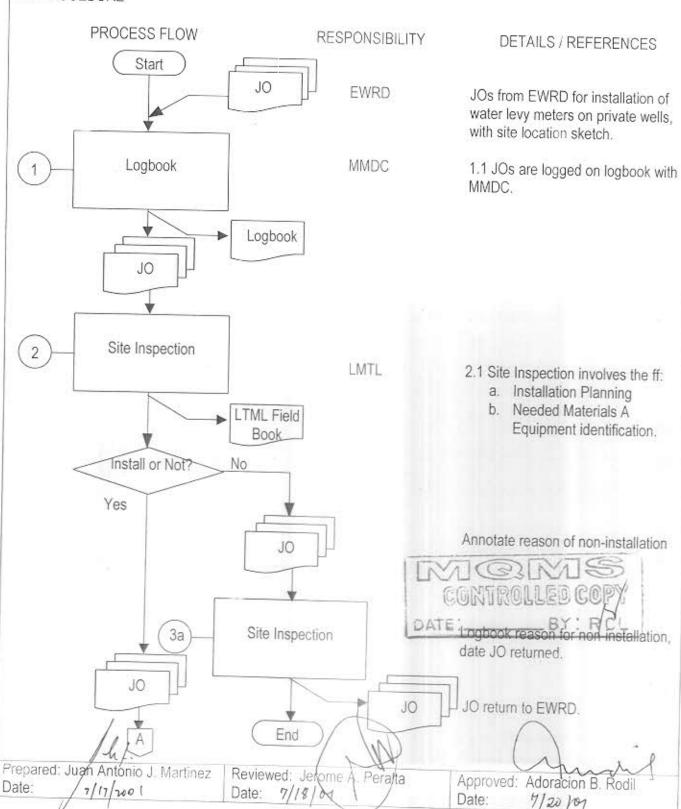
Date: 7/18/0 Approved: Adoracion B. Rodil

Date: 7/20/07 Water Levy Meters Installation

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Section	Meter Maintenance	Revision N	0. 0
Subject	Water Levy Meter Installation (New)	Effective Da	te Jan. 01,01

4.0 PROCEDURE

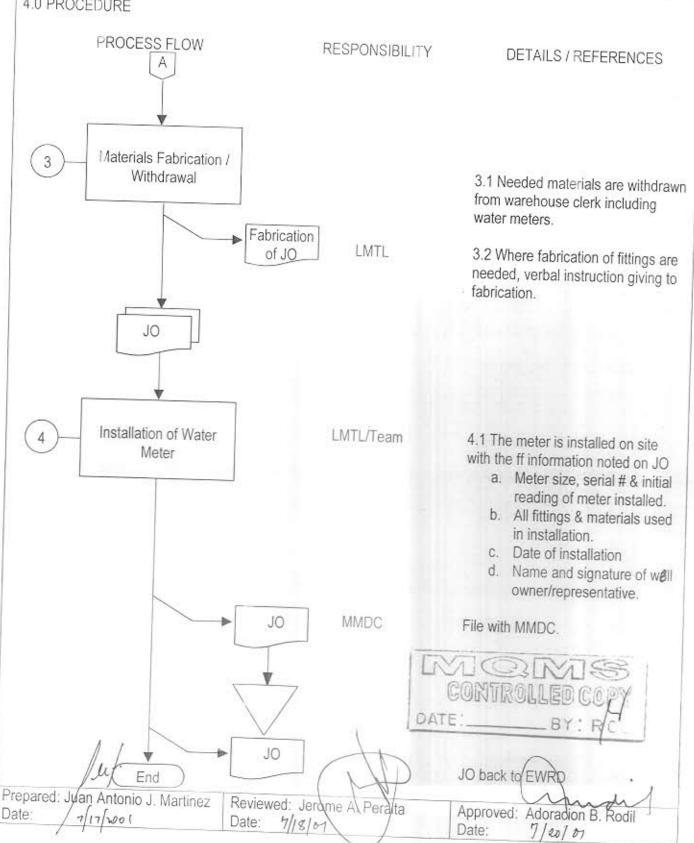


Water Levy Meters Installation



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4.0 PROCEDURE





Metropolitan Cebu Water District Quality Management System Procedures Manual

Index No. OP-PMI-001 Page No. 1 of 3 Issue No. 1 Revision No. 1 Effective Date August 27, 2003

Section	Service Connection Rehab. Div., PMD-North	
Subject	SC Leak Detection Works - North	

1.0 OBJECTIVE:

A procedure to carry out periodic leaks detection of MCWD service area.

2.0 SCOPE:

From Leak Detection target setting, to implementation, up to evaluation of results.

3.0 DEFINITION OF TERMS:

SC

Service Connection

LD Target

Leak Detection Target

PMD-N

Pipelines Maintenance Department-North Area

SCRD-N

Service Connection Rehabilitation Division-North Area

Service Area Franchise Area of MCWD

PRD

Pipelines Repair Division

Prepared:Sign d Batucan Date:

Reviewed igmund Batucan Date:

Approved: Bassanio Date:

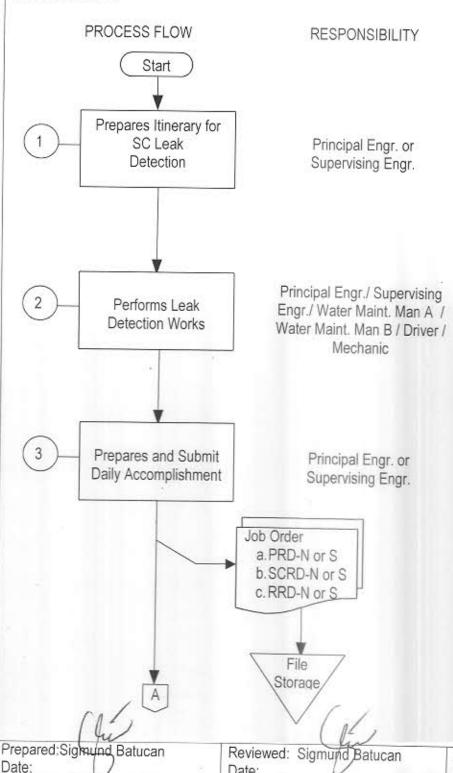
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Metropolitan Cebu Water District Quality Management System Procedures Manual

Section	Service Connection Rehab. Div., PMD- North
Subject	SC Leak Detection Works - North

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Effective Date	August 27, 2003

4.0 PROCEDURE



Date:

DETAILS / REFERENCES

Using LD target reference prepares itinerary for leak detection activity which contains the ff.

- a. The location where the particular activity will be conducted.
- b. The schedule of such activity
- Performance target

2. Perform leak detection works according to schedule.

2.1 Endorses JO for major repair/rehab works to SCRD- N or S, Endorse J.O. for RRD-N or S/PRD-N or S.

2.2 Follow up endorsed JO if job is done and gather necessary data.

Date:

Approved: Bassanio



Metropolitan Cebu Water District Quality Management System Procedures Manual		Index No.	OP-PMI-001
		Page No.	3 of 3
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Section	Service Connection Rehab. Div., PMD- North	Revision No.	1
Subject	SC Leak Detection Works - North	Effective Date	August 27, 2003

PROCESS FLOW

RESPONSIBILITY

DETAILS/REFERENCES

Evaluate Results End

AGM for Pipelines / Dept. Mgr. / Div. Mgr. / Principal Engr. / Supervising Engr.

Evaluate results of Leak Detection Program and make recommendations.

Prepared:Sigmund Batucan Date:

Reviewed: Sigmund Batucan Date:

Approved: Bassanio T. Cañete

Water Service Monitoring & Inspection Water Pilferage Prosecution

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Metropolitan Cebu Water District Quality Management System Procedures Manual		Index No.	0	P-PMI-002
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Section		Revisio	n No.	0
Subject	Water Service Monitoring & Inspection/Water Pilferage Prosecution	Effective	Date	Jan.01,01

1.0 OBJECTIVE:

To minimize water pilferage of MCWD lines by preventive monitoring & inspection and prosecuting violators.

2.0 SCOPE:

Within the territorial jurisdiction of MCWD (Metro Cebu area).

3.0 DEFINITION OF TERMS:

Water Pilferage means to:

- (a) Destroy, damage or interfere with any canal, raceway, ditch, lock, pier, inlet, crib, bulkhead, dam, gate, service, reservoir, aqueduct, water mains, water distribution pipes, conduit, pipes, wire, benchmark, monument, or other works, appliance, machinery, buildings or property of any water entity, whether public or private;
- (b) Do any malicious act which shall injuriously affect the quantity or quality of the water or sewerage flow of any water works and/or sewerage system, or the supply conveyance, measurement, or regulation thereof, including the prevention, or interference with any authorized person engaged in the discharged of duties connected therewith;
- (c) Prevent, obstruct, and interfere with the survey, works, and construction of access road and water mains and distribution network and any related works of the utility entity;
- (d) Tap, make or cause to be made any connection with water lines without prior authority or consent from the water utility concerned;
- (e) Tamper, install or use tampered water meters, sticks, magnets, reserving water meters, shortening of vane wheels and other devises to steal water or interfere with accurate registry or metering or water usage, or otherwise result in its diversion in a manner whereby water is stolen or wasted;
- (f) Use or receive the direct benefit of water service with knowledge that diversion, tampering, or illegal connection existed at the time of that use, or that the use or receipt was otherwise without the authorization of the water utility;
- (g) Steal or pilfer water meters, main lines, pipes and related or ancillary facilities;
- (h) Steal water for profit or resale;
- (i) Knowingly possess stolen or tampered water meters; and
- (j) Knowingly, or willfully allow, the occurrence of any of the above. (Sec. 8 of R.A. No. 8041 otherwise known as the "National Water Crisis Act of 1995")

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Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. 2 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Inspection/Water Pilferage Prosecution Effective Date Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES Start Other records Job Order FRM-LSD-001 Types of Inspection Job Order Field Investigator 1.1 Daily inspection of water Inspection service connection. - Each WS inspection is spray-painted on its WMS. - For routinary inspection, each Job Order is good for a group of adjacent No connections in given area. Inspection? 1.2 Individual Job Order from MCWD employees on Water Pilferage report. Yes 1.3 Individual Job Order from Legal Department resulting from phoned/walk-in from outsiders. 1.4 Individual Job Order through Field Investigator Spray Paint WMS nightshift surveillance (suspected pilferers.) 3 Confirm Pilferage Report CATE Prepared: Reviewed:

Date:

Date:

Approved: Date:

Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. 3 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Inspection/Water Pilferage Prosecution Effective Date Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES 4.1 Inspection reports are prepared Field Investigator Prepare Inspection daily. These are collated for Report weekly & monthly reporting. The monthly report is given to Corporate Planning Department. Inspection Report Field Investigator 5.1 Violation means those which 5 Identify violations are provided for in P.D. 198 as amended by R.A. 8041 No With violations' End Yes Blank Notice FRM-LSD-002 of violation DATE:

Prepared: Date:

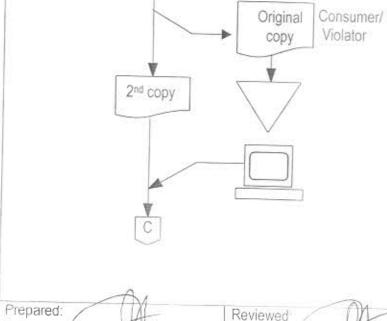
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Approved: Date:

Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. 4 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Inspection/Water Pilferage Prosecution Effective Date Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES Field Investigator Prepare 1st notice of 6.1 The first notice of violation violation contains the result of the investigation with a notice of the conduct of further investigation Notice of violation Field Investigator Violators are explained of the Issue 1st notice of nature of their violation. They must violation sign the notice and receive such.

> The field investigator then submits the copies of notice of violation together with the proof of service to the office investigator for further processing.





Date:

Water Service Monitoring & Inspection Water Pilferage Prosecution



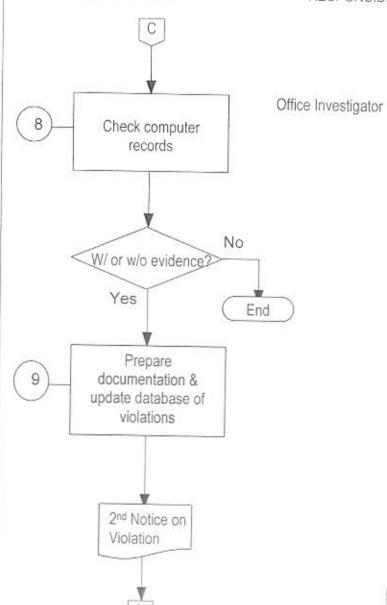
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Subject	Water Service Monitoring & Inspection/Water Pilferage Prosecution	Effective Date	Jan.01,01

4.0 PROCEDURE

PROCESS FLOW

RESPONSIBILITY

DETAILS / REFERENCES



Check the accounts ledger and the billing ledger as aid in ascertaining or confirming the violation

9.1 The second notice of violation contains the citation of specific provisions of law violated. Furthermore, the violator is enjoined to respond, in writing the Investigation Report attached, w/in 5 days from receipt. The violator is further warned of the consequences upon failure to respond. Attached also are the billing ledger and the account ledger.

CONTROLLED COPY DATE: BY: RCL

Prepared: Oate:

Reviewed: Date: X

Approved: Date:

Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. 6 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Effective Date Inspection/Water Pilferage Prosecution Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES Investigator The second notice should be 10 Issue 2nd notice of answered within 5 days or else disconnection & filing of case follow. violation 2nd notice of violation No Respond? Response on Yes the violation Division The violator given the 11 Manager explanation/confirmation Prepare reply the violation and is asked to go to the office if he's willing to settle & pay the fines & other fees. E1 DATE: Prepared: Reviewed: Approved Date: Date:

Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. 7 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Inspection/Water Pilferage Prosecution Effective Date Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES Reply draft Field Investigator Send/deliver reply 12 Reply No Violator comes? Yes Prepared: Reviewed: Approved, Date:

Date:

Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. 8 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Inspection/Water Pilferage Prosecution Effective Date Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES 13.1 Compute & present to the violator how much to settle the case under the ff. Guidelines: 1.) 1st violation (not use of magnet or illegal bypass) 13 Discuss Settlement Office Investigator P2000 + water & other fees. 2.) 2nd violation but same as in no. 1-P4,000 + water & other fees 3.) 3rd violation, still same as in no.1-P6,000 + water & other fees 4.) 4th & so on, same as in no. 1-no compromise but prosecution. 5.) 1st violation (use of magnet or illegal bypass) P10,000 + water & other fees. 6.) 2nd violation - same as in no. 5 - P20,000 + water & other fees 7.) 3rd violation - same as in no. 5 - no compromise but prosecution. 8.) Technical Violation - paying of overdue fees w/in 1 week from date of disconnection but w/o paying the reopening fee or accidental bumping/damage to the water meter resulting to its DATE inadvertent inversion/impairment - P 300. Prepared: Reviewed:

Date:

Date:

Approved:

Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. Procedures Manual 9 of 12 Issue No. 1 Section Revision No. Water Service Monitoring & 0 Subject Inspection/Water Pilferage Prosecution Effective Date Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES No Compromise? Yes Compromise Agreement? Yes For settlement? No DATE Prepared Reviewed: Approved; Date: Date: Date:

Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 Quality Management System Page No. 10 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Inspection/Water Pilferage Prosecution Effective Date Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES 14.0 Refer to procedure on Teller 14 Payment Processing payments processing (main office). (main office) 0.R. 15 Present O.R. to Office Violator Investigator 16 Clear Database of Office Investigator 18.0 Clear database of violation violation/prepare compromise agreement and give one copy to the violator. If the settlement is in installment, the Billing Department is also given a copy DATE Prepared: Reviewed: Approved: Date: Date: Date:

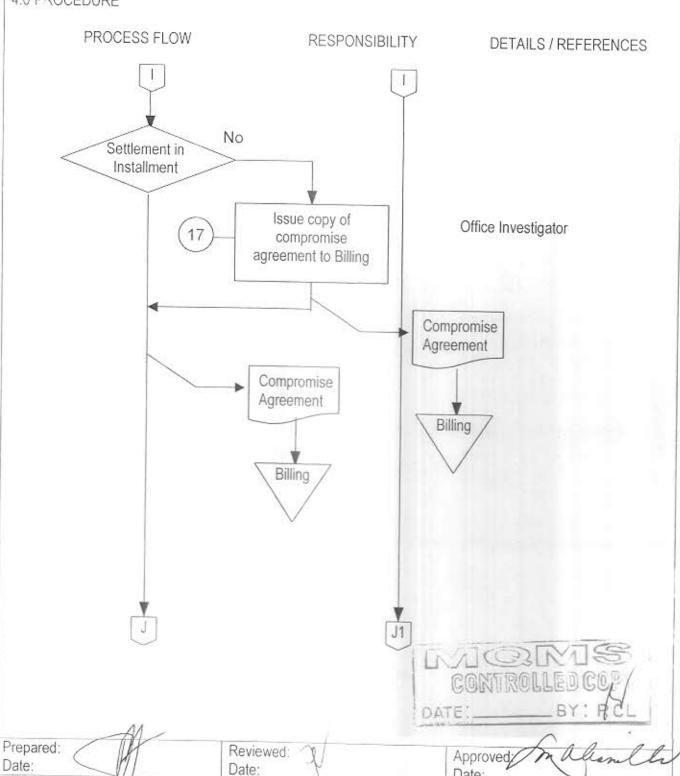
Water Service Monitoring & Inspection Water Pilferage Prosecution

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4.0 PROCEDURE



Water Service Monitoring & Inspection Water Pilferage Prosecution Metropolitan Cebu Water District Index No. OP-PMI-002 **Quality Management System** Page No. 12 of 12 Procedures Manual Issue No. 1 Section Revision No. 0 Water Service Monitoring & Subject Effective Date Inspection/Water Pilferage Prosecution Jan.01,01 4.0 PROCEDURE PROCESS FLOW RESPONSIBILITY DETAILS / REFERENCES 18 Disconnect Water Service Inform the Billing Dept. of disconnection re last reading and date Affidavit of witnesses Letter Complaint 19.0 the General Manager, assisted 19 File Pilferage Case by the Legal Department, files the pilferage case. Legal Department files the letter complaint together w/ affidavit of witnesses with the Office of the City or Provincial Prosecutor. End DATE Prepared: Reviewed: Date: Date: