


Declogging of the Slow Sand Filter Bed

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	Subject	Declogging of the Slow Sand Filter Bed	Effective Date	Jan. 01, 01

1.0 OBJECTIVE:

To guide filter plant optrs. on how to de-clog slow sand filter bed.

2.0 SCOPE:

This guide or procedure includes all aspect of the de-clogging process.

3.0 DEFINITION OF TERMS:

Slow Sand Filter Bed – A type of water treatment that uses a combination of sand and gravel as a filter media to treat raw surface water.

Surface Water – free-flowing water coming from rain, streams and or rivers.



Prepared: *[Signature]*
Date: 6/28/01

Reviewed: *[Signature]*
Date: 6/25/01

Approved: *[Signature]*
Date: 7/17/01

Declogging of the Slow Sand Filter Bed



Metropolitan Cebu Water District
**Quality Management System
 Procedures Manual**

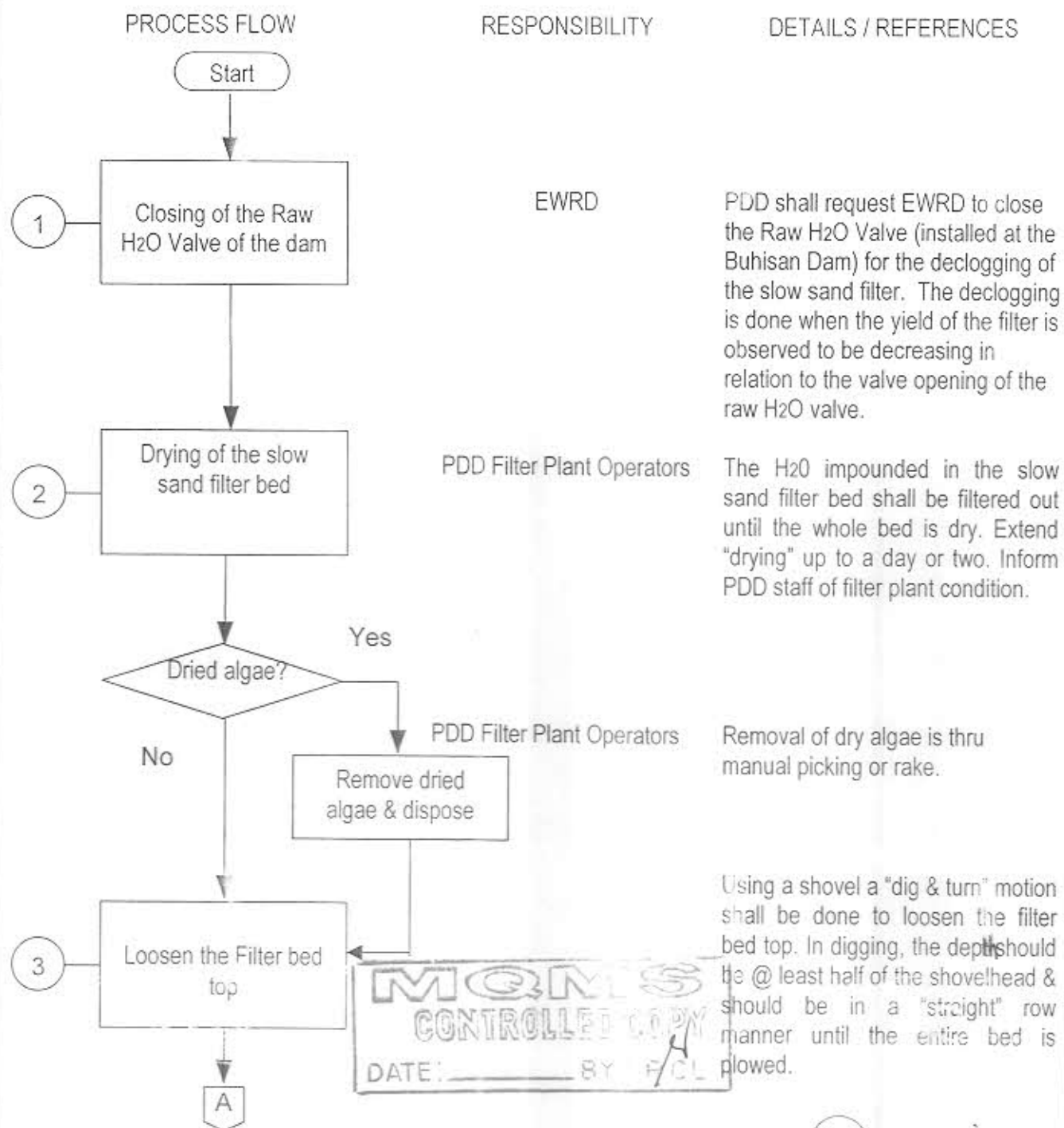
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Declogging of the Slow Sand Filter Bed

4.0 PROCEDURE



MQMS
 CONTROLLED COPY
 DATE: _____ BY: FCL

Prepared:
 Date:

Reviewed:
 Date:

Approved:
 Date:

6/20/01

6/25/01

7/17/01

Declogging of the Slow Sand Filter Bed



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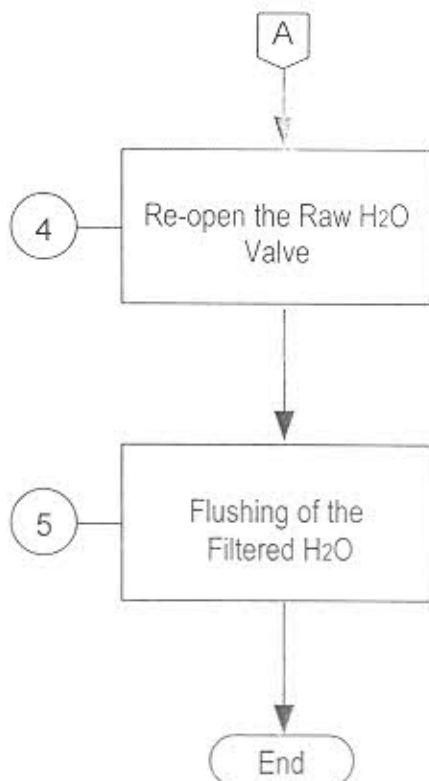
Jan. 01, 01

4.0 PROCEDURE

PROCESS FLOW

RESPONSIBILITY

DETAILS/REFERENCES



EWRD

PDD shall request EWRD to reopen the valve as specified/require.

PDD Filter Plant Operator

Flushing should last for at least 5 minutes.



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Date:

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Section

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Regular Pump Check – Up and Monitoring

Effective Date

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1.0 OBJECTIVE:

A procedure on the regular or preventive check-up of pumps.

2.0 SCOPE:

From determining which pumps will be checked-up to making and submitting of accomplishment report.

3.0 DEFINITION OF TERMS:

Acc. Report - Accomplishment Report

EMD - Electro-Mechanical Division

JO - Job Order for Repair of Pump

MSSD - Maintenance Support Services Department

Pump - Refers to include any or all of the pump-electric motor assembly, controls and other gadgets.



Prepared: Rey T. Iban

Date: 06/20/01

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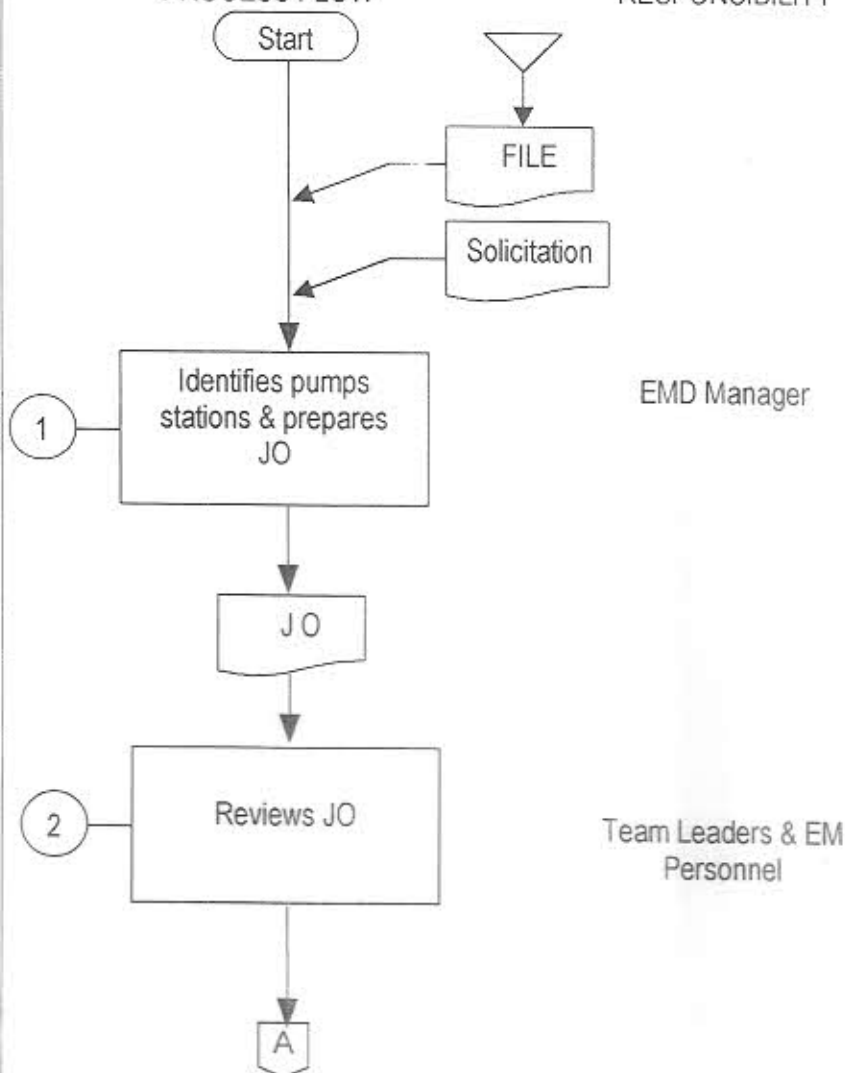
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4.0 PROCEDURE

PROCESS FLOW

RESPONSIBILITY

DETAILS / REFERENCES



Review Historical records of Pumping station including those logbooks maintained by the maintenance personnel

Solicit ideas/or operational observations from maintenance personnel on the performance of the equipment

- 1.1 Determine those pumping station that are problematic in option including those older installations and those that are included in the list of stations for preventive checkup for the month
- 1.2 Analyze and determine the important things to be done during the station's checkup to improve its operational performance
- 1.3 Prepare JO FRM-POM-001

- 2.1 Sort JO according to location, nature of checkup, effective personnel to handle the JO & accessibility of the site.
- 2.2 Discuss to the electrician/s, or Plant Mechanic, or Water Maint'ce personnel regarding the purpose and the objective of the JO.
- 2.3 Determine the scope of Work if it can be categorized as major work accomplishes JO for Pump Corrective Maint'ce or Project Administration.
- 2.4 Make a materials list needed.
- 2.5 Assign vehicle to be used.



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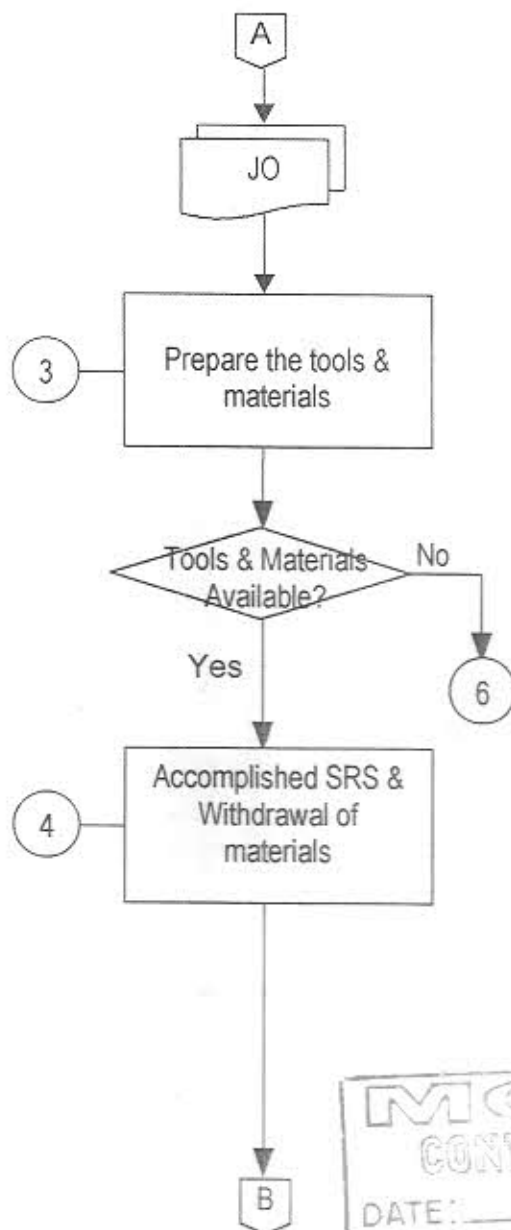
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4.0 PROCEDURE

PROCESS FLOW

RESPONSIBILITY

DETAILS/REFERENCES



E/M Maintenance Personnel

E/M Maintenance Personnel

1. Final JO
2. List of needed materials

3.1 Verify & secure proper tools
 3.2 Verify availability of materials from stock & if not prepare SRS for the Main Warehouse


If YES, then proceed with the approval/signing of SRS.
 If NO, then fill the appropriate box in the JO and submit to the Team Leader the unaccomplished JO with the list of material not available from the stock & proceed to procedure No. 6.

- 4.1 Accomplished SRS & withdraw the needed materials.
- 4.2 Load to assigned vehicle the needed materials.
- 4.3 Inform the EMD Mgr & their respective Team Leader that they be leaving for the assigned job and that all of the necessary things are ready like gate pass, Pump Station Keys & mats.
- 4.4 Review, if not very familiar with the job, the Work Standard Procedure from the DivMgns Office or asked for reorientation of the same Team.

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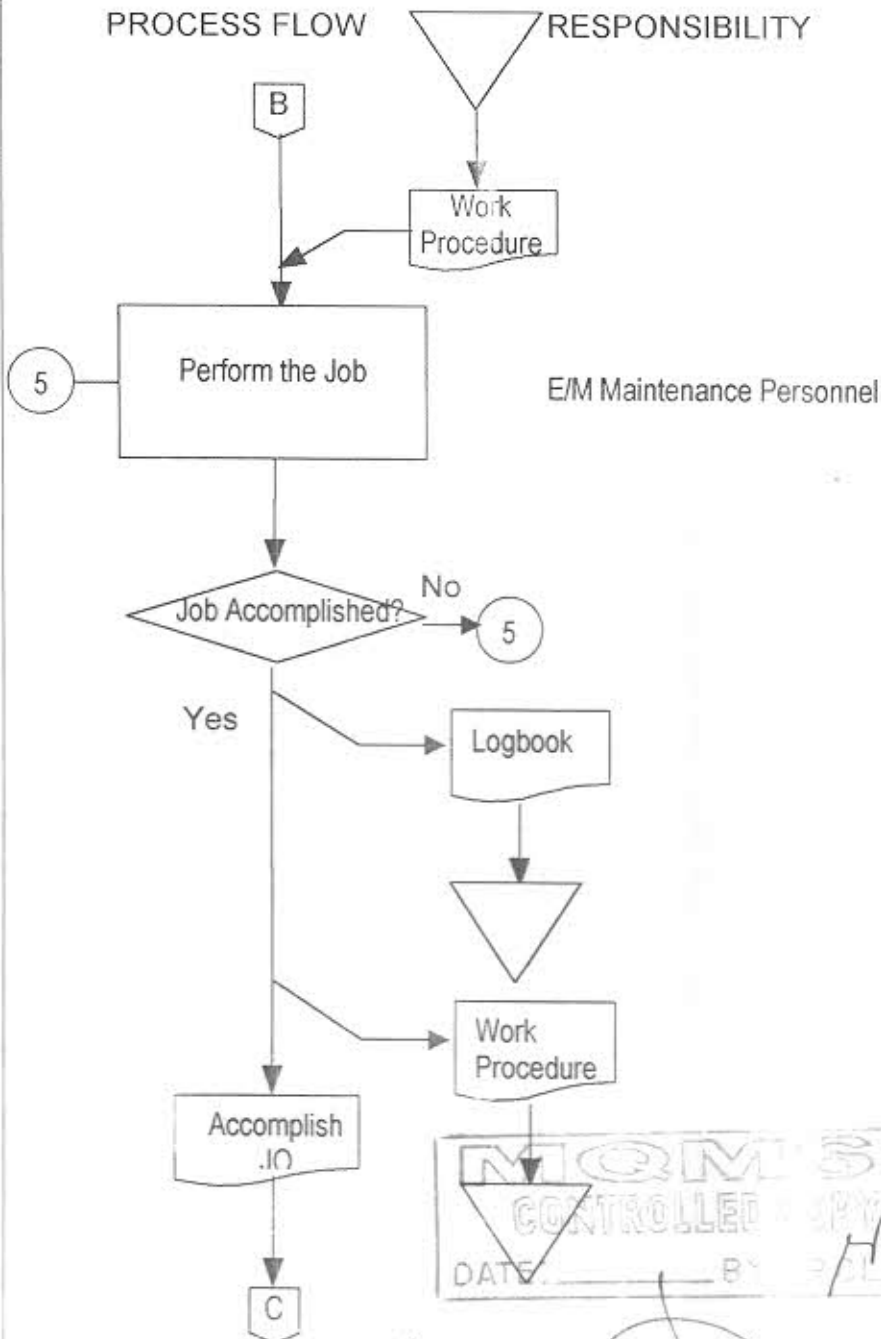
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4.0 PROCEDURE

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1. Review of the Work procedure.
2. Informed by the respective Team Leader of the Work Standard Procedure

5.1 Performs repair using following the standard work procedure.
 5.2 Retrieve Individual Daily Activities Logbook from the individual shelves or table to record observations.

If YES, then proceed with the accomplishing of the JO.
 If NO, then return to routine No.5

Return Logbook to individual's storage shelf

Return Work Procedure File to the office of the Div. Mgr's Office if borrowed.

Accomplish the JO by writing down in the space provided in the JO form, the activities or work done in the station. The accomplished JO will be submitted to the Team Leader who will discuss & review with the Div. Mgr. The correctness of the Job.

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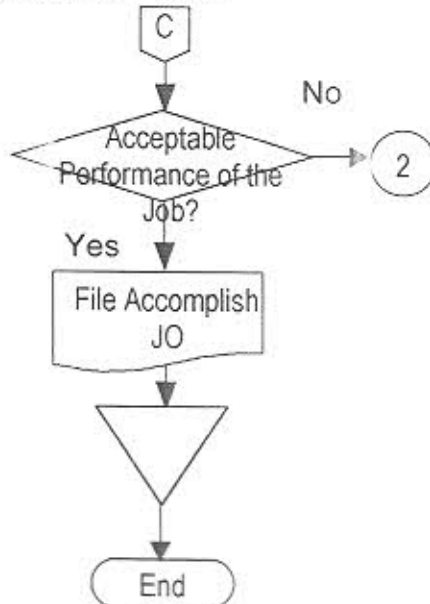
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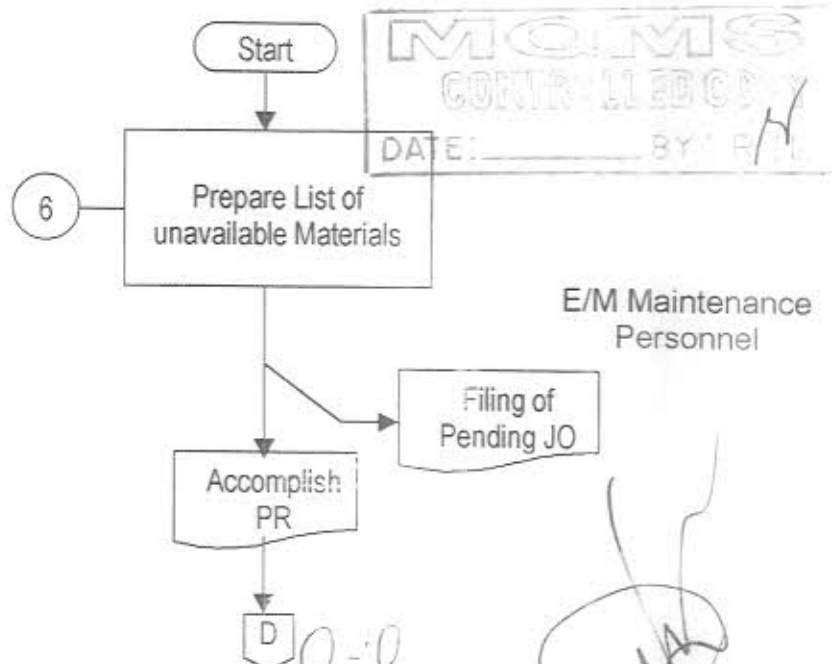


DETAILS/REFERENCES

If YES, then file JO in the Accomplish JO folder at the Team Leader's Table
 If NO, then return to routine No. 2.

File accomplished JO to the Accomplished JO folder at the Team Leaders Table.

Procedure No. 6



6.1 Prepare a list of unavailable materials & submit it to the Team Leader & discuss the matter to the Div. Mgr.

6.2 The JO will be files in the Pending JO folder at the Team Leader's Table

6.3 Rescheduling of the JO will be reset until the arrival of the additional material requirement.


JO filed in the Pending JO folder at the Team Leader's Table

Purchase Request filed to the Procurement Division.

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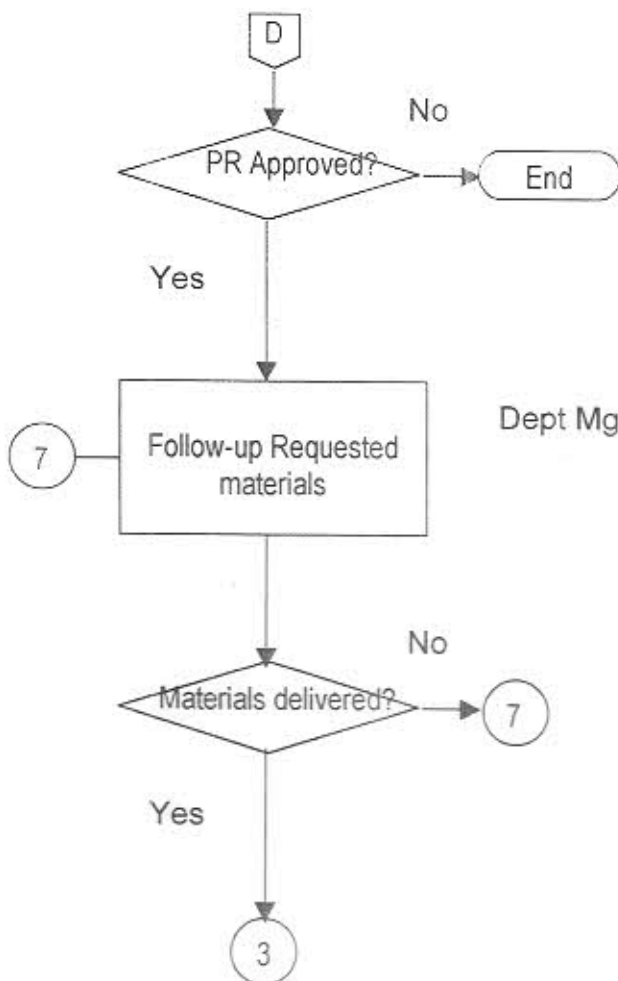
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4.0 PROCEDURE

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Dept Mgr & EMD Mgr

If YES, then follow-up JO

If NO, then end.

7.1 makes follow-up of the status of the Purchase Requisition in the Procurement Division.
 7.2 make an evaluation of the quoted items and submit recommendations for the complying material.

If YES, then proceed to routine 3.

If NO, then return to routine 7.



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Regular Pump Check-up and Monitoring



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1.0 OBJECTIVE:

A procedure on the regular or preventive check-up of pumps.

2.0 SCOPE:

From determining which pumps will be checked-up to making and submitting of accomplishment report.

3.0 DEFINITION OF TERMS:

Acc. Report - Accomplishment Report

EMD - Electro-Mechanical Division

JO - Job Order for Repair of Pump

MSSD - Maintenance Support Services Department

Pump - Refers to include any or all of the pump-electric motor assembly, controls and other gadgets.



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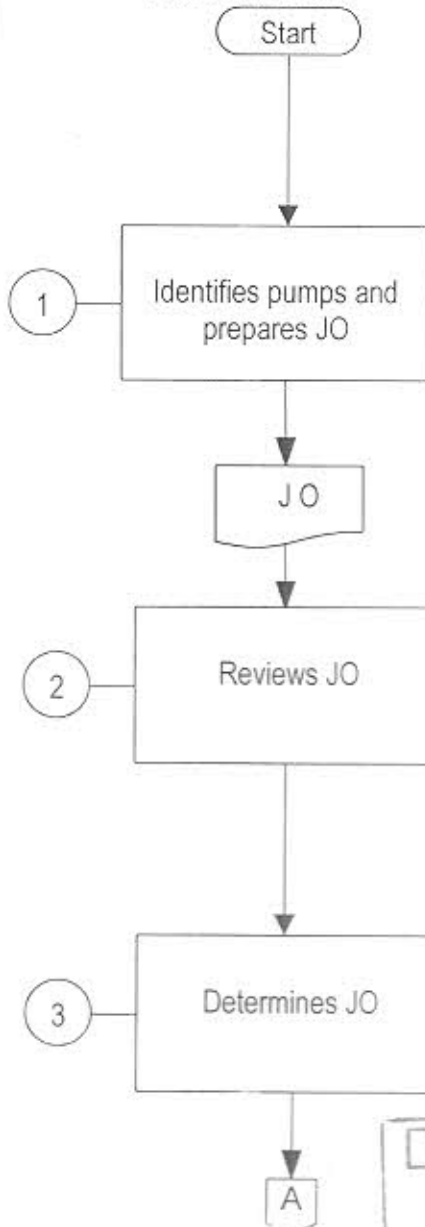
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Subject **Regular Pump Check -up and Monitoring****4.0 PROCEDURE****PROCESS FLOW****RESPONSIBILITY****DETAILS / REFERENCES**

EMD Manager

Team Leaders

Team Leader

Reports from other dept's/others of their observations in pumping operations.

1. Other Dept's.
2. Consuming Public
3. Preventive Maintenance Schedule

1. EMD Manager, on a daily basis, identifies the pump station to be under preventive check-up/monitoring and prepares job order for such.

2. Team Leaders will sort Job Orders according to location, nature of check-up, personnel effectiveness, and accessibility.


3. Performs preventive check-up according to procedure # _____. Determines trouble on the pumps, if there are symptoms of trouble. Also determines if trouble is minor which can readily be fixed.



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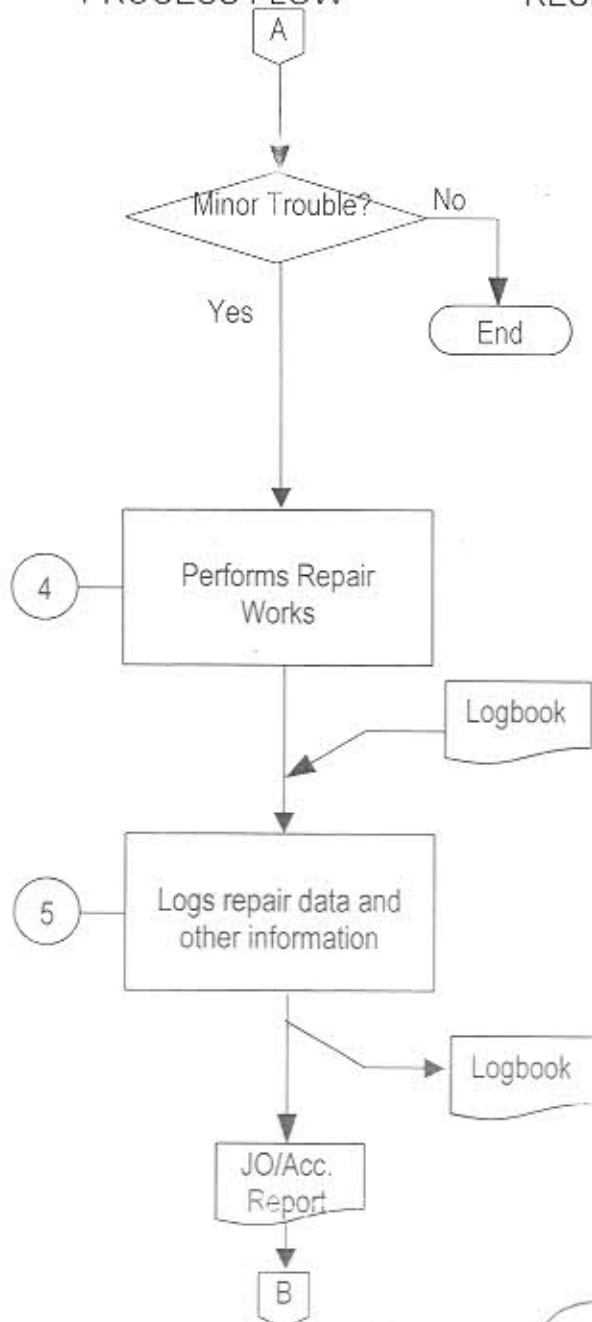
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4.0 PROCEDURE

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If YES, which means that trouble is minor, proceed w/ repair works.

If NO, which means that trouble is major,

1. Prepares job order for such.
2. Submit J O to EMD Manager.

Team Leader

4. Performs necessary repair works.

Team Leader logbook

Team Leader

a.) Records in the logbook pertinent data on repair and related activities.

b.) Prepares accomplished report.



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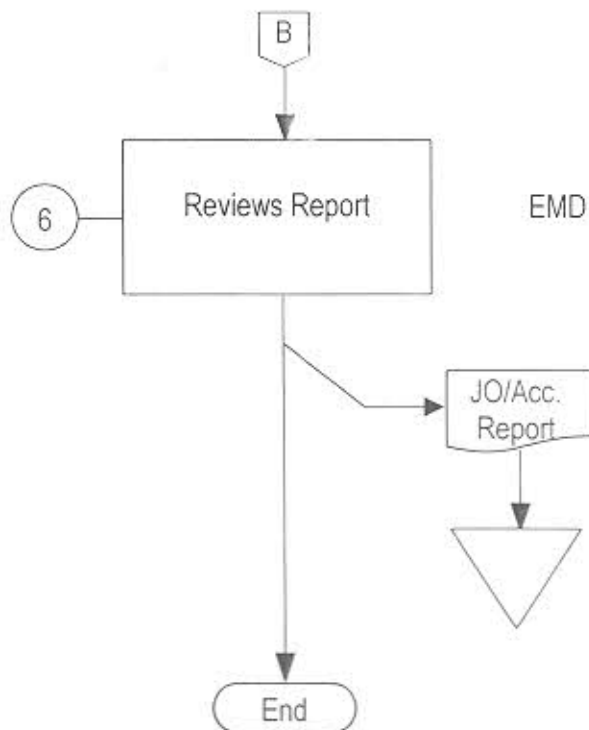
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4.0 PROCEDURE

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RESPONSIBILITY

DETAILS/REFERENCES



EMD Manager

Reviews accomplishment report
 and assess data on repair made by
 work group.

Acc. Report and JO filed at EMD
 Managers file.



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Pump Corrective Maintenance

1.0 OBJECTIVE:

A procedure in undertaking repairs of equipment.

2.0 SCOPE:

From J O or written request, to determining the workability of the equipment up to the completion of Job Order.

3.0 DEFINITION OF TERMS:

EMD - Electro/Mechanical Division

JO - Job Order

MRS - Material Return Slip

MSSD - Maintenance Support Services Department



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**Quality Management System
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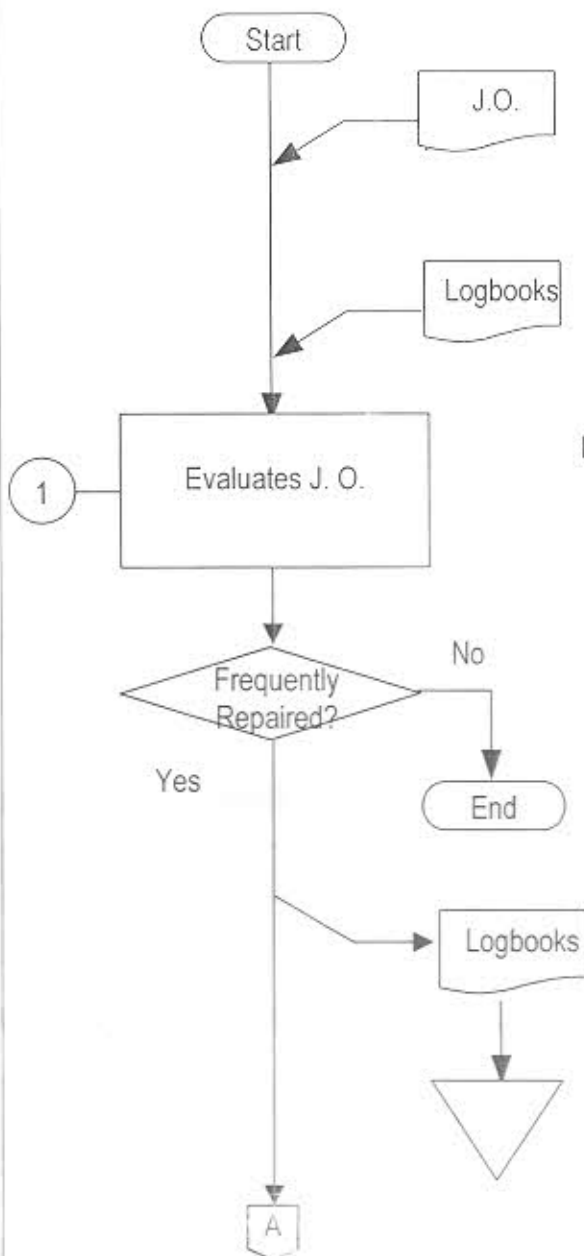
Pump Corrective Maintenance

4.0 PROCEDURE

PROCESS FLOW

RESPONSIBILITY

DETAILS / REFERENCES



EMD Manager & Team Leaders

1. Preventive Maintenance Team
2. Other Departments
Note: These JO's can either be written or verbal. It may be a product from formal or informal meetings. Only Div.Mngr. and up who can issue. FRM-POM-001

Logbooks from the E/M Maintenance Personnel

Evaluate JO and review historical performance of the pump to determine frequency of breakdown.

If YES, then evaluate the pump condition whether it needs full rehab.

If NO, then end.

Return Logbook/s to E/M Maintenance Tables

EMD Manager



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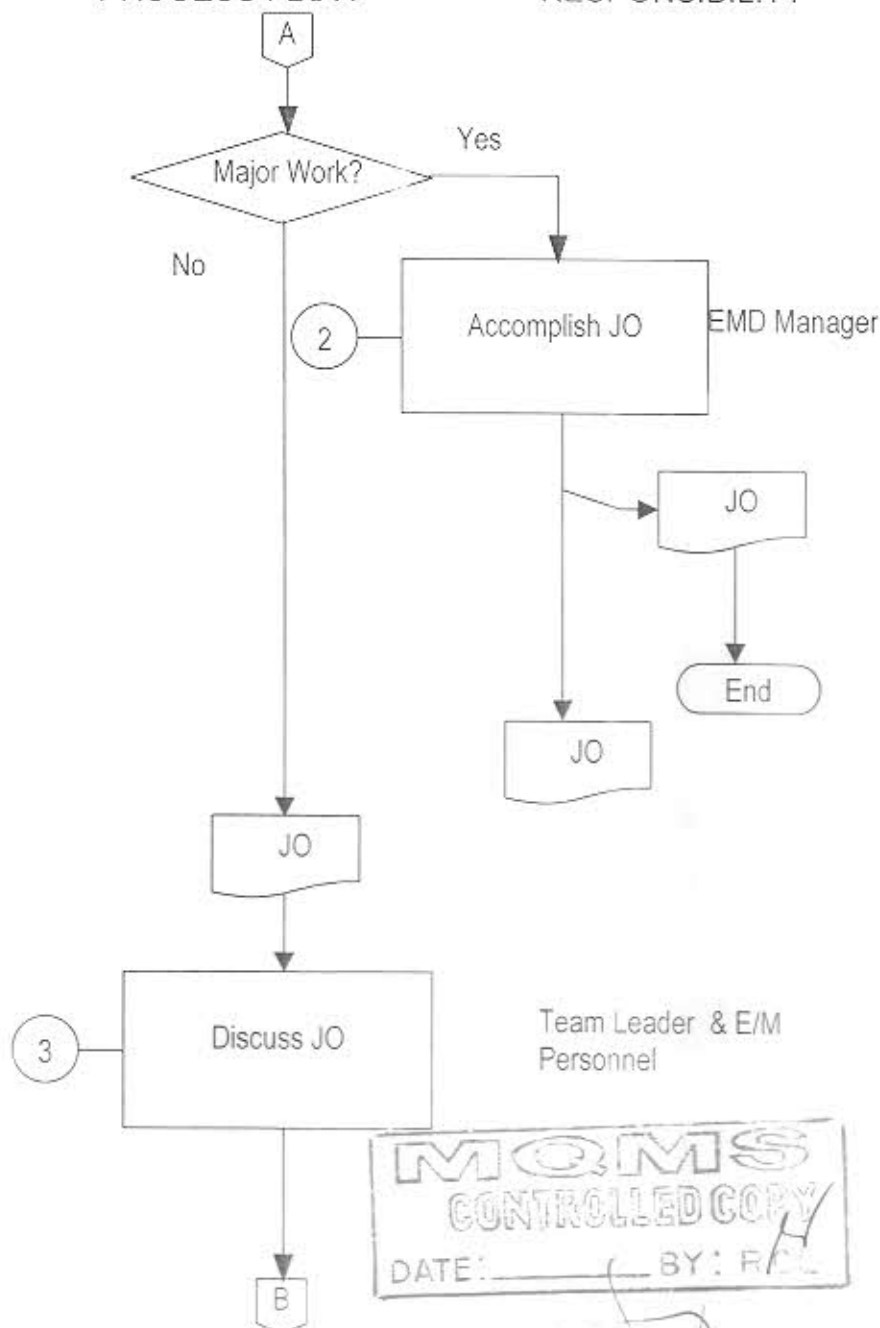
Pump Corrective Maintenance

4.0 PROCEDURE

PROCESS FLOW

RESPONSIBILITY

DETAILS/REFERENCES



If YES, then accomplish JO for the Project Administration.

If NO, accomplish JO

Process JO for the Project Administration Procedure.

Original JO for the Corrective Maintenance Procedure discarded.

New JO for the Project Administration Project.

JO for Corrective Maintenance Procedure. FRM-POM-001

- 3.1 Discuss to the electrician/s, or Plant Mechanic, or Water Maintenance personnel regarding the purpose & the objective of the JO.
- 3.2 Determine the Scope of Work.
- 3.3 Make a list of materials needed.
- 3.4 Assign vehicle to be used.

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4.0 PROCEDURE

PROCESS FLOW

RESPONSIBILITY

DETAILS/REFERENCES



E/M Maintenance Personnel

1. Final JO
2. List of needed materials

4.1 Verify & secure proper tools.
4.2 Verify availability of materials from stock & if not, prepare SRS for the Main warehouse.

If YES, then proceed with the approval/ signing of SRS.
If NO, then fill the appropriate box in the JO and submit to the Team Leader the unaccomplished JO with the list of material not available from the stock and proceed to No.8.

E/M
Maintenance Personnel

- 5.1 Accomplish SRS and withdraw needed materials.
- 5.2 Load to assigned vehicle the needed materials.
- 5.3 Inform the EMD Mgr and their respective Team Leader that they are leaving for the assigned job & that all necessary things are ready like Pump Station Keys, materials & gate pass.
- 5.4 Review, if not very familiar with the job, the Work Standard Procedure from the Div.Mgrs Office or asked for the same reorientation of the same from respective Team.



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