# 5W1H & WHY WHY ANALYSIS

# 5W1H Analysis

**Department** : Water Systems
**Section** : RO Plant –Process
**Location** : RO Stage 1
**Problem** : Permeate Flow Across RO1 Membranes is Reducing Drastically

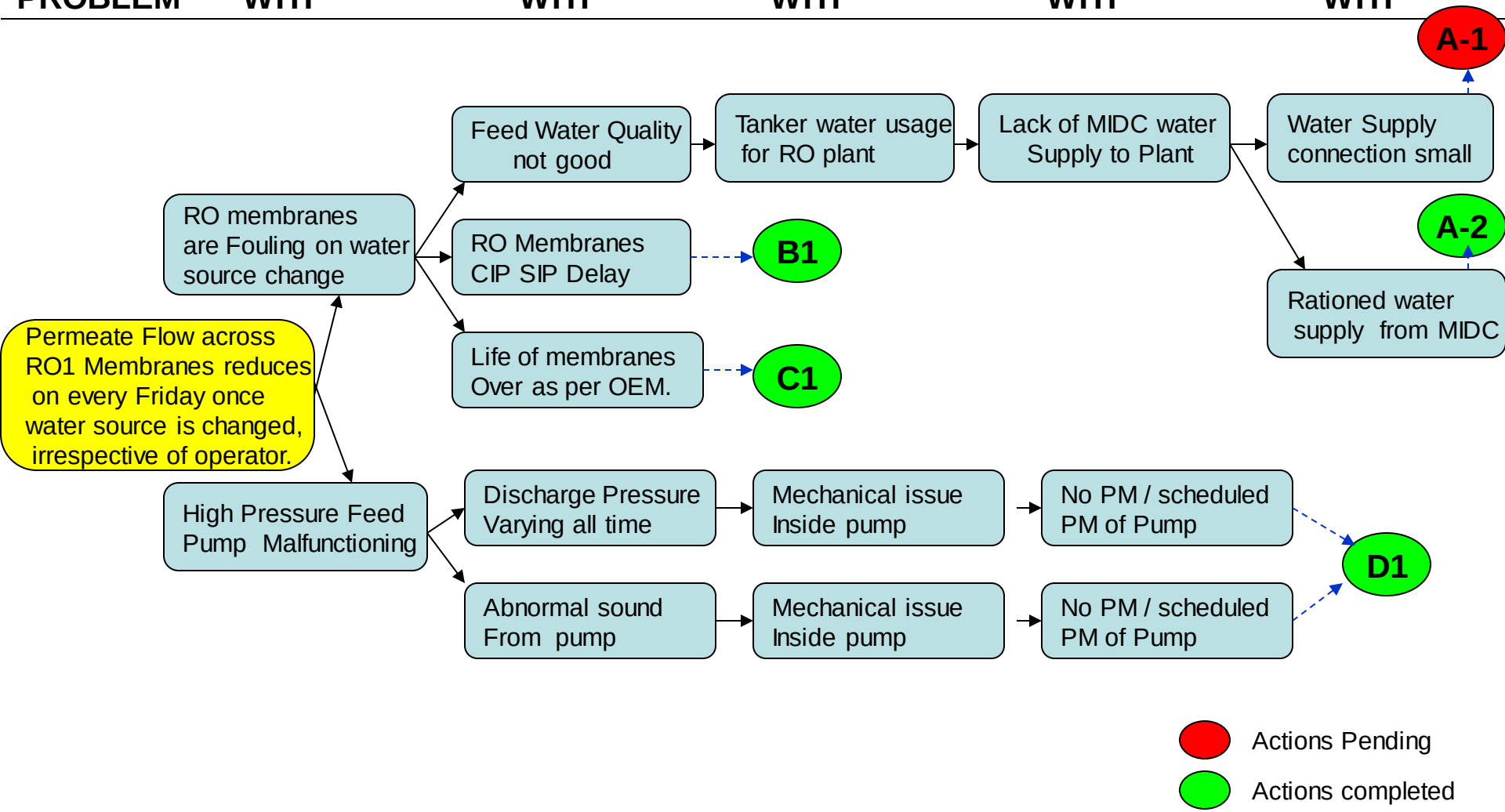
| | |
|---|---|
| **WHAT** | RO stage 1 Permeate Output low |
| **WHEN** | On every Friday once water source is changed |
| **WHERE** | RO stage 1 permeate Output |
| **WHO** | Independent of Person |
| **WHICH** | Lack of RO water for Distillation units-WFI shortage |
| **HOW** | Every Week – 4 /5 times in a Month |

**Redefined Problem Statement** :Permeate Flow across RO1 Membranes reduces on every Friday once water source is changed, irrespective of operator.

# 5-WHY Analysis

**Department** : Water Systems **Section** : RO Plant –Process **Location** :RO Stage 1

| PROBLEM | WHY | WHY | WHY | WHY | WHY |
|---|---|---|---|---|---|



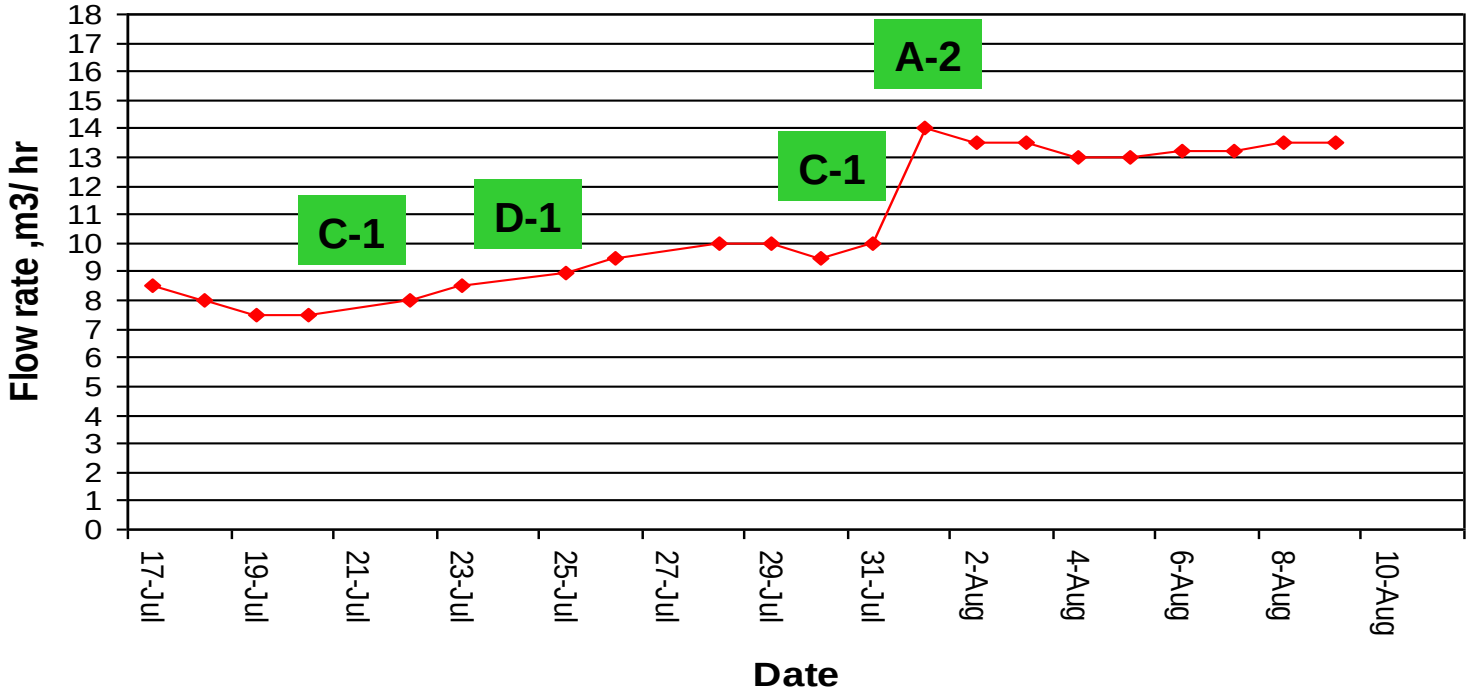
# 5-WHY Analysis

**Department** : Water Systems **Section** : RO Plant –Process **Location** :RO Stage 1

| Sr. No | Actions Description | Date | FPR | Status |
|---|---|---|---|---|
| 1 | Plan to Install 6" size water supply connection from MIDC. | 15 Oct 07 | PBB AKR | A-1 |
| 2 | Meet MIDC executive Engineer & check fact for water rationing in industrial area. | 30 July 07 | PBP | A-2 |
| 3 | Execute CIP SIP along with Aquatech & NALCO teams . | 22 July 07 | GM | C-1 B-1 |
| 4 | Check the Life of RO membrane with Hydranautics USA. | 20 July 07 | DLH | D-1 |
| 5 | Plan PM & Servicing of the High pressure feed pump of RO stage 1. | 24 July 07 | PBP | |

# 5-WHY Analysis-RESULT

**Permeate Flow across RO stage-1 membranes increased to 13.5 m3/hr from 8.0m3/hr .(68% increase in Permeate Flow)**




**Permeate Flow Across RO-1 Stage**