

ENGINEERING DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Engineering

TITLE: Sanitization of UF membrane

SOP No.	Revision No.	
Effective Date	Supersedes No.	
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1.0 **OBJECTIVE:**

To lay down a procedure for Sanitization of UF Membrane.

2.0 SCOPE:

This SOP is applicable for Sanitization of UF Membrane.

3.0 RESPONSIBILITY:

Officer / Executive Engineering

4.0 ACCOUNTABILITY

Head Engineering

5.0 PROCEDURE:

5.1 CIP SKID:

- **5.1.1** Alternate Pump shall be used for sanitization.
- **5.1.2** Fill the CIP tank with 200 ltr. of purified water
- **5.1.3** Switch on the heater raise the temperature of Purified water inside the CIP Tank up to $85 \, ^{\circ}\text{C} \pm 2 \, ^{\circ}\text{C}$.
- **5.1.4** Circulate this hot water in UF Pressure vessel through circulation pump minimum for 1 hour.
- **5.1.5** Drain the hot water and circulate with fresh purified water, to down the temperature of the UF Membranes.
- **5.1.6** Officer / Executive Engineering shall intimate QC to collect the sample for the analysis.
- **5.1.7** Officer / Executive QC shall collect the sample from different sampling locations as per the schedule, analysis and submits the report to QA.
- **5.1.8** Officer / Executive Engineering shall prepare a Sanitization schedule as per **Annexure I.** "UF **Membrane Sanitization Schedule**".
- **5.1.9** Frequency of the sanitization shall be 30 ± 7 days or whenever required.



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5.1.10 Record the sanitization details as per Annexure –II. "UF Membrane Sanitization Record".

6.0 REFERENCES:

Not applicable

7.0 ANNEXURES:

ANNEXURES No.	TITLE OF ANNEXURE	FORMAT No.
Annexure-I	UF Membrane Sanitization Schedule	
Annexure-II	UF Membrane Sanitization Record	

ENCLOSURES: SOP training record

8.0 DISTRIBUTION:

Controlled Copy No. 1 Head Corporate Quality Assurance

• Controlled Copy No. 2 Head Engineering

• Master Copy Quality Assurance Department

9.0 ABBREVIATIONS:

SOP Standard Operating Procedure

QA Quality Assurance QC Quality Control °C Degree Centigrade

CQA Corporate Quality Assurance

NLT Not Less Than ID Identification No.

10.0 REVISION HISTORY:

CHANGE HISTORY LOG

Revision No.	Details of Changes	Reason for Change	Effective Date	Updated By
00	New SOP	Nil	Nil	Nil



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ANNEXURE – I UF MEMBRANE SANITIZATION SCHEDULE

S.No.	DATE	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	REMARK
1.														
2.														
3.														
4.														
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														

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Complete

Prepared By Executive / Officer Engineering Sign & Date Checked By Head Engineering Sign & Date Approved By Head QA Sign & Date



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ANNEXURE – II UF MEMBRANE SANITIZATION RECORD

AREA / BLOCK:

S.No.	Month	Date	Temp. 85± 2°C	CIP Pump ID	Water collected for sanitization (200 ltrs.)	After achieving temp. circulation Time (01 hr.) Start End		Done by	Checked By
					(======================================	Time	Time		
1.	April								
2.	May								
3.	June								
4.	July								
5.	Aug.								
6.	Sept.								
7.	Oct.								
8.	Nov.								
9.	Dec.								
10.	Jan.								
11.	Feb.								
12.	March								