STANDARD OPERATING PROCEDURE

Department: Engineering			
TITLE: Sanitization of Mixed Bed Unit			
SOP No.		**Revision No.**	
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1.0 OBJECTIVE

The purpose of this SOP is:

2.1 To describe the procedure for sanitization of Mixed Bed Unit.

3.0 SCOPE

3.1 This SOP is applicable for the procedure for sanitization of Mixed Bed Unit.

4.0 RESPONSIBILITY:

4.1 The Maintenance Operator shall be responsible:

4.1.1 Responsible for sanitization of sanitization of Mixed Bed Unit.

4.1.2 Responsible for maintaining the sanitization record.

4.2 The Maintenance Engineer shall be responsible:

4.2.1 Responsible for ensure the proper sanitization.

4.2.2 Responsible to take corrective action if any deviation observed.

5.0 ACCOUNTABILITY

Head –Engineering Services

6.0 PROCEDURE:

6.1 PRIMARY CHECKS:

6.1.1 Before starting the sanitization, switch OFF the MCB of the feed pump,

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provided in the PLC based control panel.

6.1.2 Ensure that the UV purifier, conductivity monitors are switched OFF.

6.2 **SOLUTION PREPARATION:**

6.2.1 Take about 1500 liters of Hydrogen peroxide (1% concentration) in the feed water tank.

6.3 **STARTING PROCEDURE:**

6.3.1 Keep the valves V1, V4&V5 are open.

6.3.2 Switch ON the feed pump by manually.

6.3.3 Inject the solution into the sanitization of Mixed Bed Unit.

6.3.4 Displace the water from the beds to drain, then route the solution back to the feed tank through the pipelines, micron filters and UV purifier.

6.3.5 Soak the solution for about 1 hour.

6.3.6 After one hour soaking, Re circulates the solution for again one hour.

6.3.7 After re circulation, drain out the solution by opening the drain valves.

6.3.8 Flush the feed water tank, Mixed beds, pipe lines, UV purifier, and cartridge filters with Reverse Osmosis water till the traces of hydrogen peroxide is absent by using analysis strips. If it found absent, regenerate the mixed beds with double quantity of regenerates. Otherwise continue the flushing till get the hydrogen peroxide traces free from water.

6.3.9 Switch ON the UV purifier & conductivity monitor.

6.3 **FREQUENCY OF SANITIZATION:**

6.3.1 Sanitization of Mixed beds unit to be carried out once in a Month.

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7.0   ANNEXURES:

Annexure-I   :   Sanitization record of Mixed Bed Unit

8.0   REFERENCES (S)

NIL

9.0   GLOSSARY

SOP   :   Standard Operating procedure

No   :   Number

MCB   :   Mixed Column Base.

PLC   :   Programmable Logic Controller.

UV   :   Ultra Violet.

&   :   And.

%   :   Percentage.

V   :   Valve.

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ANNEXURE I

SANITIZATION RECORD OF MIXED BED UNIT

S.No.	Date of Sanitization	Sanitization Time		Sanitization Done By	Remarks	Operator's Signature	Engineer's Signature
		From	**To**				