



Water Treatment Solutions for Distilleries

The most efficient and cost effective system for concentrating spentwash to achieve zero discharge.

Features

- Up to 70% reusable permeates reducing load compositing/evaporation
- Reduced pressmud and land requirement
- Established applications on both raw and biomethanated spentwash
- Over 30,000 M3 of spentwash treated every day

| Parameter | Biomethanated Spentwash Feed | Rochem Treated |
|-----------|------------------------------|----------------|
| TDS (PPM) | 30,000 | < 1,000 |
| COD (PPM) | 50,000 | <250 |
| BOD (PPM) | 12,000 | <30 |
| Recovery | 50% - 70% | |



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CASE STUDY

Distillery Unit, Gajraula (U. P.)

Background : The spentwash from the unit was being treated in the existing ETP. This existing treatment facility was inadequate to meet discharge standards.

Besides, there was a requirement to reduce effluent loads through wastewater recovery for recycle/reuse.

Plant Installed : RO + NF System
(PLC Based for fail safe unattended operation)

Input : 1200 cum/day of post-biomethanation effluent

Recovery Rate : 50% by RO & 20% by NF (the reject from the RO is fed to the NF modules to obtain colourless permeate)

Plant Performance

| Parameter | Unit | Effluent (Input to RO) | Premeate Output | NF Output |
|---------------------------|---------|------------------------------------|-----------------|---------------------|
| Flow | cum/day | 1200 | 600 | 240 |
| Colour | | Dark Brown | Colourless | Colourless |
| pH | - | 6.8-7.0 | 6.8-7.0 | 6.6-7.4 |
| Total Dissolved Solids | ppm | 45000 (Total) 24000 (Inorganic) | < 1000 | < 25000 (Inorganic) |
| Chemical Oxygen Demand | ppm | 45000 | < 250 | < 12000 |
| Biochemical Oxygen Demand | ppm | 10000 | < 30 | < 4000 |
| Total Suspended Solids | ppm | 2000 | Nil | Nil |

Salient Features

The combination of the above treatment scheme with composting has resulted in the unit achieving zero discharge for the 1200M³ effluent fed through the system. The installation is now being increased to handle a volume of 2400M³/Day.

General Parameters for Distillery Units

| Parameter | Biomethanated Spentwash | | Raw Treated | |
|-----------|-------------------------|--------|-----------------|--------|
| | Feed | Thread | Feed | Thread |
| TDS (PPM) | 30000 - 50000 | < 1000 | 35000 - 55000 | < 1500 |
| COD (PPM) | 40000 | < 250 | 120000 - 160000 | < 3000 |
| BOD (PPM) | 12000 | < 30 | 60000 - 75000 | < 1000 |
| Recovery | 50% & NF 20% | | 40% & NF 20% | |