



Case Study

Elevating **Monster™ Energy Beverage**
Production with Advanced
Water Treatment

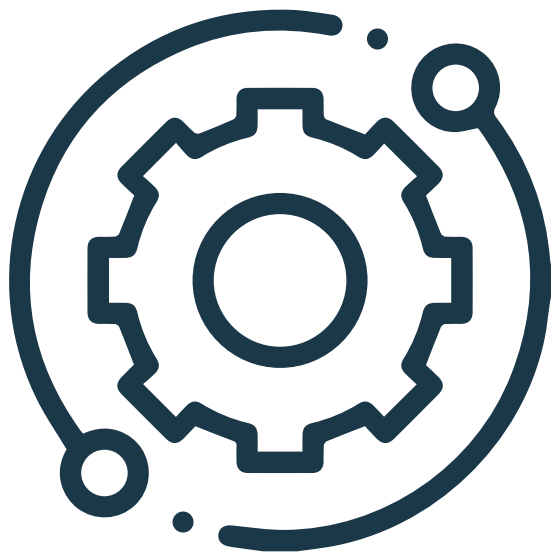
Monte Grande **Argentina** e Itabirito **Brasil**

 **fluence™**



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Client:
Coca-Cola Femsa

Locations:
Monte Grande (Argentina) and Itabirito (Brazil)

Cutting-edge Technologies:
Reverse Osmosis and Ultraviolet



Tailored Solution:
Demineralized Water Production for Monster Beverages



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Unleashing Excellence: The Challenge

Femsa, a powerhouse in the Coca-Cola family, stands tall as a premier bottler across Latin America. Operating in Argentina and Brazil, the company entrusted Fluence with the task of enhancing water treatment systems in two pivotal plants, Monte Grande and Itabirito, for the production of demineralized water vital to crafting Monster Energy™ beverages.

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Crafting Success: The Process Unveiled

Femsa Itabirito (Brazil)

Faced with the need to expand, Femsa Itabirito sought a water treatment system for demineralized water production. Fluence engineered a reverse osmosis system with a high permeate recovery, slashing raw water consumption by a staggering 66 GPM.

From PTAP dechlorinator filters to ultrafiltration and a dual-stage reverse osmosis (RO) system with precision cartridge filters, every step was meticulously designed. Antiscalant and sodium metabisulfite dosages ensured scaling control and residual chlorine elimination, respectively. The 100% operational RO system, seamlessly integrated with an ultraviolet (UV) system, delivered a flow of 484 GPM of demineralized water.

This project, centered on hydraulic capacity and pretreatment performance, aimed to provide 110 m³/h of demineralized water, significantly cutting raw water consumption, and optimizing energy efficiency.

Quality of Demineralized Water Produced

Parameter	Unit	Actual Value
Conductivity	uS/cm	< 25
STD	ppm	< 15



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Femsa Monte Grande (Argentina)

In Monte Grande, the focus was on achieving a permeate water production capacity of 220 GPM. The innovative system included a two-stage reverse osmosis process, culminating in a meticulous ultraviolet (UV) disinfection phase. This comprehensive approach not only optimized permeate water production, but also ensured microbiological sterility, meeting Monster's rigorous quality standards.



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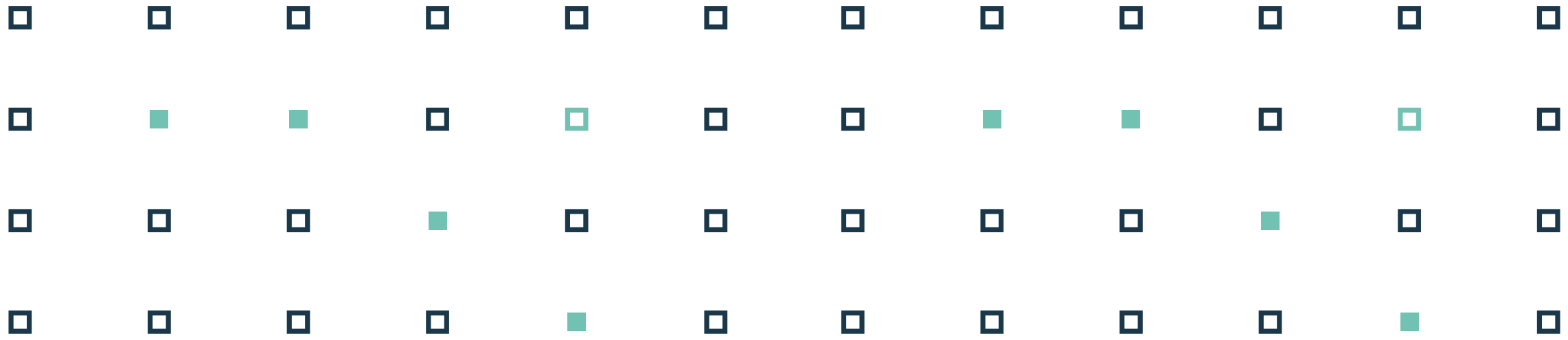
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Triumphant Results: Key Takeaways

Both reverse osmosis treatment systems were meticulously developed, prioritizing precision, safety, and user-friendliness to ensure the treated water met the stringent quality standards for Monster beverage production.

Fluence's technical team remains steadfast in providing ongoing support to the plants. Moreover, this success has propelled the initiation of new water treatment projects, embodying the continuous improvement vision to optimize the overall efficiency of the treatment plants.

Fluence and Femsa have not just met expectations, but have set a new standard for excellence in beverage production.



Value from Water

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