

## Eliminate Trucking via ECD Driven Lithium Separation

### Project Details

**Industry:** EV Battery Mfg.

**Wastewater Source:** Electrolyte Leak and Wash Water

**Target Ion:** Lithium

### Project Requirements

- <3ppm effluent lithium limit for discharge compliance
- Eliminate off-site trucking of Lithium waste
- Separate lithium to enable >90% water recovery

### Challenge

EV battery manufacturing produces  $\text{LiPF}_6$  bearing wastewater exceeding typical discharge limits that require off-site disposal methods like trucking.

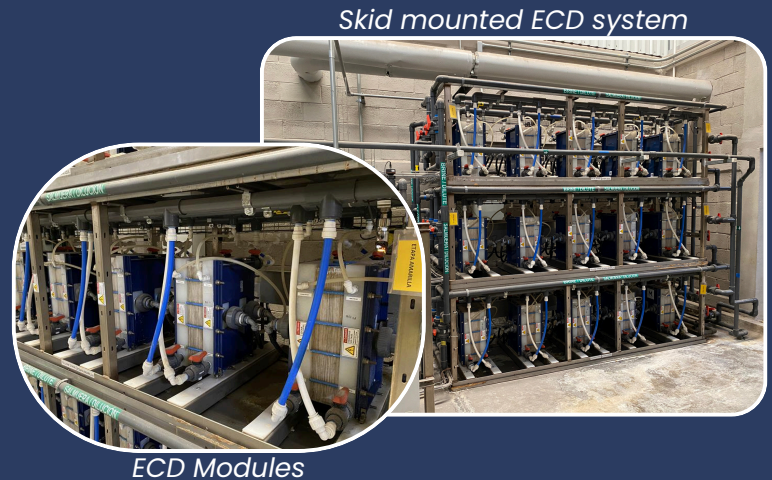
**Is off-site disposal the only reliable solution for managing lithium bearing wastewaters?**

### Solution

A pilot utilizing Membrion's modular electro-ceramic desalination (ECD) system demonstrated the ability to **upconcentrate lithium by >20x**, resulting in:

- **98% water recovery**
- **>90% lithium removal**

Over 85% of lithium mass was transferred into <5% of total brine volume, enabling compliance, unlocking on-site reuse, and eliminating trucking.



### ECD Enabled Separation

