Aquatech

Solving Water Scarcity & Ensuring Critical Minerals Recovery

Innovative Technologies Enabling the Energy Transition

Your Trusted Partner for High-Purity EV Battery Metal Production

Aquatech is the global leader in producing high-quality lithium products for EV batteries and recycling. Our end-to-end solutions ensure efficient and reliable results for your business, from testing to final output. We guarantee the highest-purity EV battery metal production.

43+	2000+	800+	25+
Years of Innovating	Installations in over 60 Countries	Global Employees	Patent Families
80,000+	1.6B+	3000+	1981
Tons of Lithium Refining Per Year (TPA)	Gallons of Water Treated Daily	Megaliters of Water Reused Daily	Consistent Ownership Since Founding

What We Do: SINCE 1981 WE DESIGN AND SUPPLY SOLUTIONS

Water Reuse & Zero Liquid Discharge

Recycling water and eliminating wastewater for discharge.

- Water Reuse & Recycle
- Minimum Liquid Discharge
- Zero Liquid Discharge

Critical Minerals & Metals Resource Recovery

Extracting essential minerals like lithium and metals from water.

- Lithium Extraction, Refining & Conversion
- Metals Mining & Recovery
- Brine Mining & Salt Recovery

Industrial Water Treatment

Purifying water for industrial use.

- Process Water Treatment
- Produced Water Treatment
- Wastewater Treatment

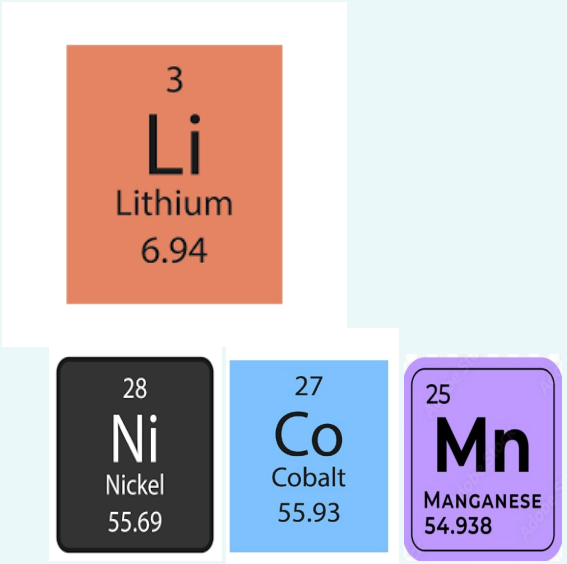
Desalination & Brine Mining

Removing salt and minerals from seawater to obtain fresh water.

- Membrane Desalination
- Thermal Desalination
- Hybrid Desalination
- Brine Mining & Salt Recovery

Aquatech's Solutions for the Battery Industry Supply Chain

1 - **Lithium Extraction, Refining & Conversion**



2- **Recovering Metals** from Recycled Batteries

3- Treating/Reusing/Harvesting **Wastewater CAM – pCAM – Anode**

- Environmental Compliance
- Recover/Manage Na2SO4
- Recover Li2SO4

Aquatech's Global Footprint

Major Office Locations

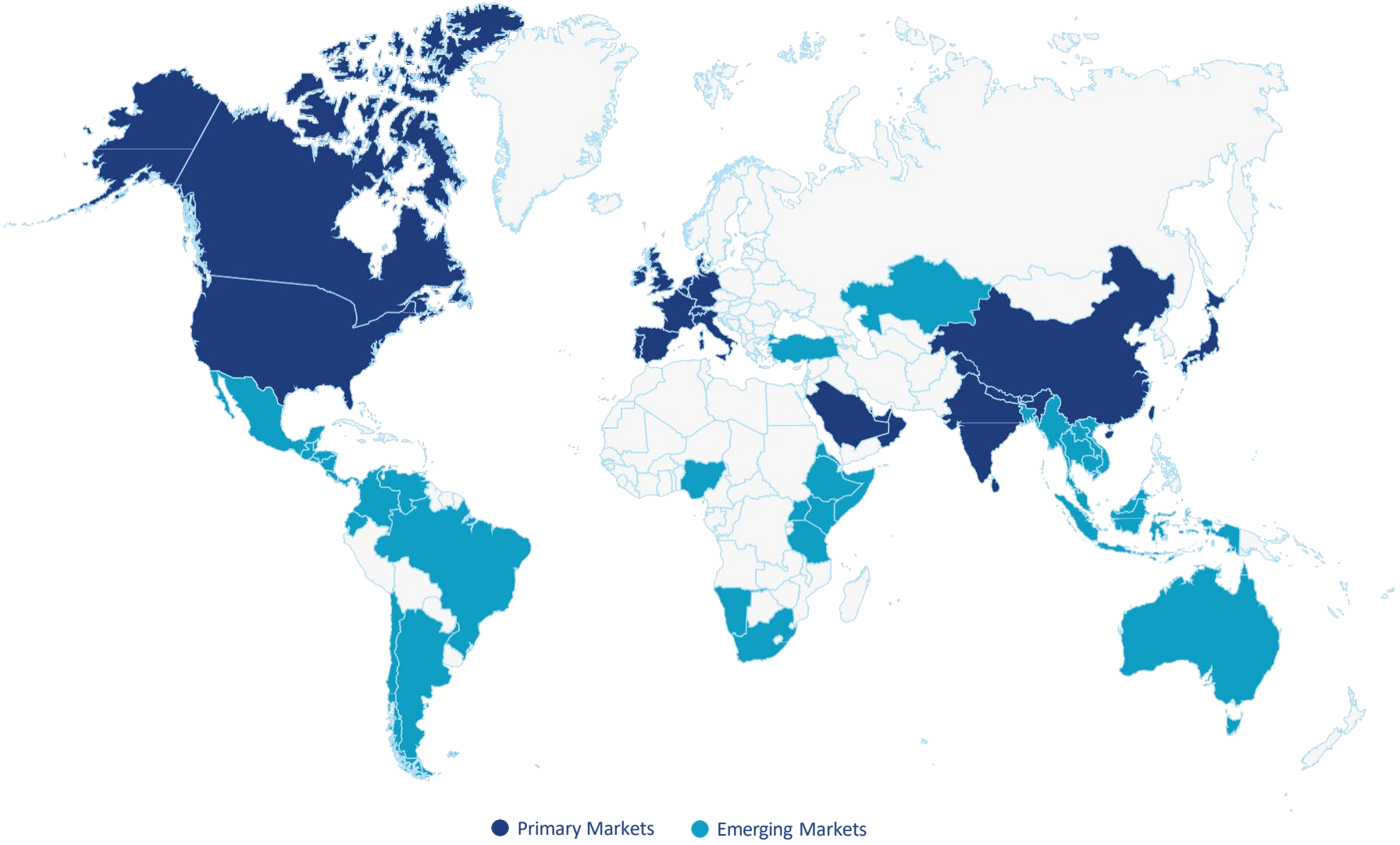
- **Corporate Headquarters**
  Pittsburgh, Pennsylvania
- **QUA Corporate Headquarters**
  Pittsburgh, Pennsylvania
- **ICD Process Technologies**
  Hartland, Wisconsin
- **Eastern Hemisphere Headquarters**
  Pune, India
- **Key Subsidiaries**
  United Arab Emirates
  Guangzhou, China
  Stockholm, Sweden

Applied Development & Testing Centers

- Wisconsin, United States
- Pennsylvania, United States
- Pune, India

Key Manufacturing Facilities

- Aquatech
  Pennsylvania, United States
- QUA Membranes
  Pune, India
- WEX Chemicals
  Pune, India



Modularization Assembly Shop

100,000 ft^2 manufacturing center in Canonsburg, Pennsylvania

Headquarters

Fabrication

Module Fitting

Final Assembly

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Applied Development & Testing

Process Development

- Bench-Top Testing
- Process Simulation

Process Demonstration

- Pilot Testing
- Product Samples for Market

Product Characterization

- Elemental Analysis
- Microscopic Imaging
- Property Determination

Aquatech's Applied Development & Testing Facility
Hartland, Wisconsin

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Processing Battery Grade Lithium With Various Feedstocks

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Processing Battery Grade Lithium With Various Feedstocks

Spodumene

Clay

Salars

Unconventional Brines

Complete lithium processing capabilities:

- **Battery-Grade**: lithium carbonate (>99.9% purity Li_2CO_3), lithium hydroxide monohydrate (LiOH)
- **Lithium Salts:** lithium chloride, lithium sulfate, lithium bromide, lithium phosphate
- **Battery Recycling:** sustainable recovery of critical minerals from black mass

End-To-End Solutions

Process Development

Pilot Testing

Process Engineering

Detailed Engineering

Full Solution Supply

Commissioning & Start-up

Complete Process Technology

Brine Concentration

Crystallization

Clarification

Ion Exchange

Physical-Chemical Treatment

Membranes

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Recovering Nickel/Cobalt/Manganese Sulfates and Lithium from Recycled Batteries

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Recovering Nickel/Cobalt/Manganese Sulfates and Lithium from Recycled Batteries

Aquatech is a global leader in advanced technology solutions for the lithium-ion battery supply chain. Specializing in key applications for lithium battery recycling, the company focuses on:

- Concentration, purification, and production of high-purity EV metal production, including lithium chemicals, cobalt sulfate, nickel sulfate, and manganese sulfate
- Management of sodium sulfate and other raffinate byproducts

Utilizing applied development and testing centers in Hartland, WI and Canonsburg, PA, Aquatech adapts proven technologies deployed in over 2,000 projects to the battery recycling industry.

Aquatech's Equipment Solutions for Lithium/Nickel/Cobalt Compound Crystallization

Solvent Extract	Polishing & Concentration	Crystallization & Conversion	Refinement
		Battery Grade Ni/Co Technical Grade Li	Battery Grade Li
	• Ion Exchange Systems • Ultrafiltration Systems • Phys/Chem Treatment Systems • Spray Film Evaporators • Vertical Tube Falling Film Evaporators	• Draft Tube Baffle Crystallizers • Forced Circulation Crystallizers • Reactive Crystallizers	• Re-Pulp • Re-Crystallization

Treating Wastewater from CAM/pCAM, And Anode Manufacturing Facilities

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Treating Wastewater from CAM/pCAM, And Anode Manufacturing Facilities

Precursor cathode active material (pCAM) is a powder-like substance containing critical components such as nickel, cobalt or other chemical elements.
Cathode active materials (CAM) are typically composed of metal oxides ((LiCoO2, LiMn2O4, LiFePO4, LiNiMnCoO2.

Wastewater from CAM

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Brine containing

- Ammonia
- Lithium 5,000 – 12,000 mg/L
- Sodium 2,000 mg/L
- Sulfate 20,000 – 45,000 mg/L
- Co/Ni/Mn/Cu 5-100 mg/L
- Hi TDS – 60,000 mg/L

WW from pCAM

⇩

Brine containing

- Ammonia
- Sodium 20,000 – 40,000 mg/L
- Sulfate 40,000 – 80,000
- Lithium 300-700 mg/L
- Co/Ni/Mn/Cu 5-100 mg/L
- Hi TDS – 20,000 – 90,000 mg/L

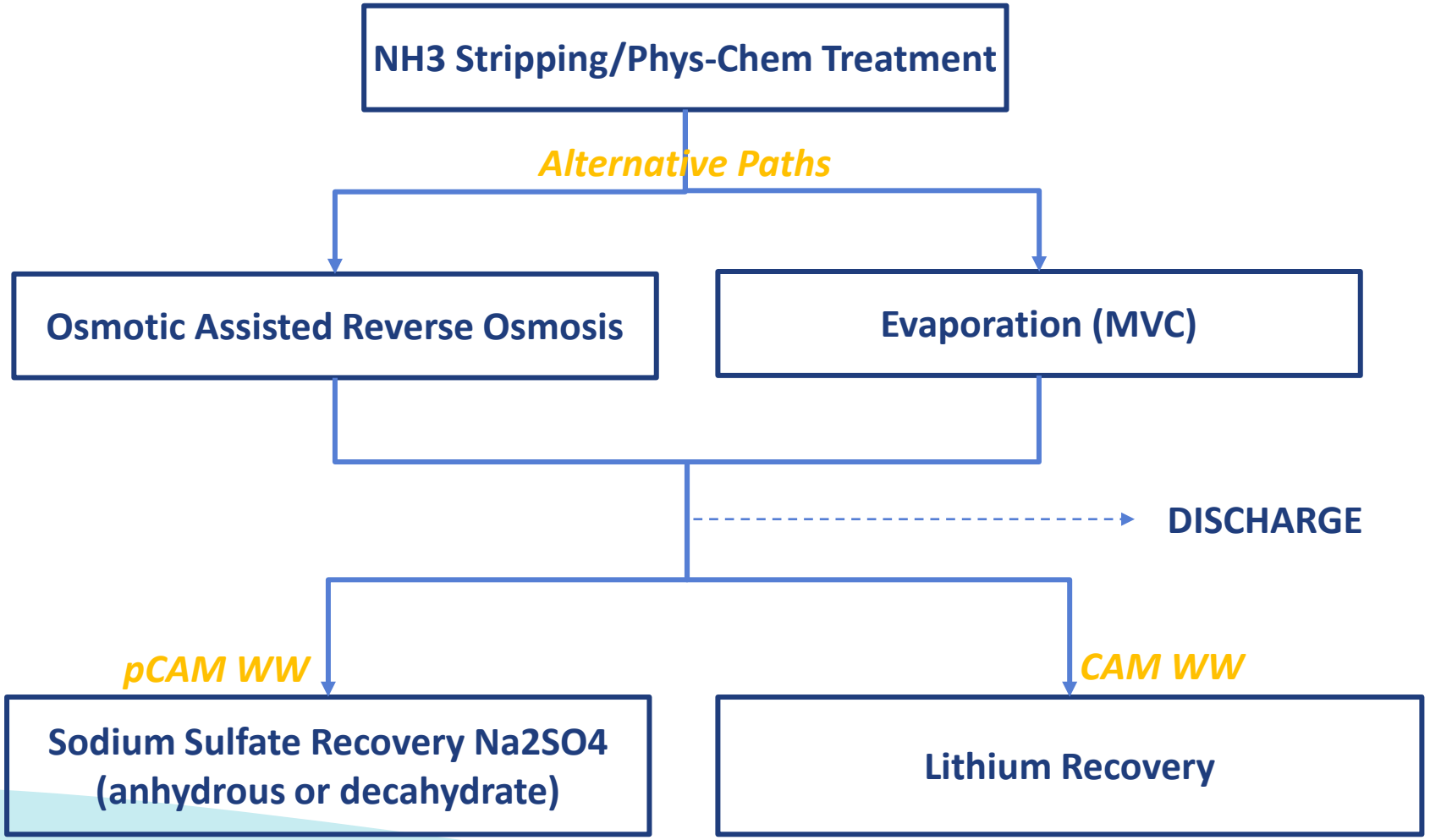
- Usually ammonia is removed and then disposed to sea or surface water – Waste of potential resources
- CAM wastewater richer in Lithium while pCAM WW richer in Sodium
- Challenge in Brine Handling and Salt Recovery

pCAM/CAM Wastewater Treatment – Solution
BRINE HANDLING & HARVESTING

PRETREATMENT
NH3 TSS Metal Ca removal

SALT CONCENTRATION
Membrane based or Thermal Based

SALT RECOVERY
NaSO4 / Li (Sulfate/Carbonate)



Project Delivery Models

Large Projects

Design and Supply of Critical Process equipment

Mid Size - Small Projects

Design and Supply with Modular Plants

- Complete Scope (excluding brine mining)

DBOOM / Lease Options

- Upgrading Plants starting
- Technical Grade LC to LHM or B/G Lithium Carbonate
- Conversion Facilities with the following feedstocks
    - Lithium Chloride brine or salt
    - Lithium Sulfate Salt
    - Low-Quality Lithium Carbonate

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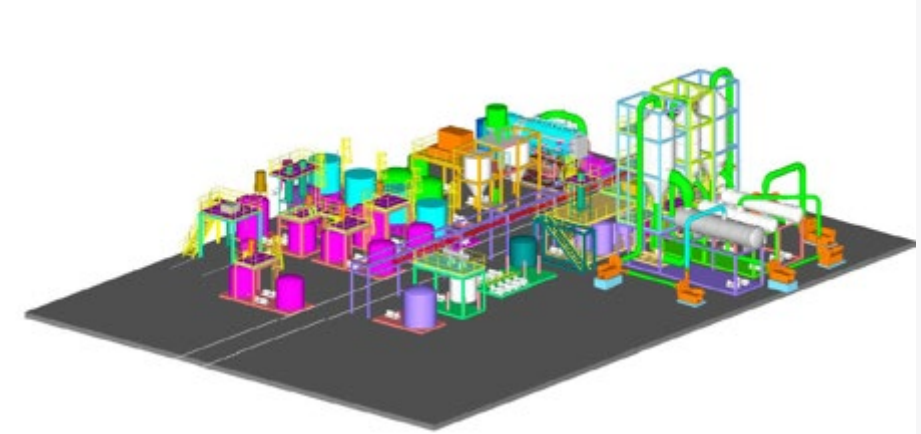
Major Works – Lithium Refining

TYPE OF PROJECT	LOCATION	SCOPE OF EQUIPMENT	ANTICIPATED PRODUCTION (TPA LCE)	Year Installed
Lithium Claystone Refining	USA	Magnesium Sulfate Crystallizer Circuit, Carbonation and Battery-Grade Refining	Li2CO3 40,000 (Phase 1)	Expected in 2026
Geothermal Brine Conversion	USA	Membrane Filtration, Impurity Removal, Osmotically Assisted Reverse Osmosis, Evaporators, Refining	LHM 25,000	Expected in 2026
Salar Brine Conversion	Argentina	Evaporators	LiCl 10,000	2025
Oilfield Brine	USA	Carbonation and Refining	Li2CO3 6,000 (Phase 1)	Expected in 2026

Modular Facilities – 3000 tpy LCE

Key Design Considerations

- To be built in Aquatech fabrication shop
- Can be transported to anywhere in North and South America
- Plug and Play Design
- Variable Feed Source
- Any DLE Eluate or Brine will be compatible
- Reduce the site installation factor to around 2 from 4
- Delivery in 18 months - 22 months



Modules	Nos.	Approximate Weights
Brine Conditioning		
Ca, Mg treatment- Filtration- B Treatment	7 Modules	15000- 120,000 lbs
Concentration		
Membrane System- Evaporator	5 Modules	12000- 210,000 lbs
Conversion		
Crystallization and Bicarbonation	13 Modules	8,000-90,000 lbs
Refining		
Ion Exchange and Crystallizer	7 Modules	6,000-120,000 lbs

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Aquatech VALUE PROPOSITION

- **360 ASSESSMENT.** Holistic and Technology agnostic approach. Multiple option assessment. In-house knowledge on both membrane and thermal solutions
- **TECHNOLOGY INTEGRATION**. Desing and Supply of concentration technologies as well as experience in delivering Industrial Grade Lithium Salt
- **VALIDATION CAPABILITIES**. Application Process Lab available for testing and validation of process design and performances