

Alumina and Bauxite Mines, Smelters, and Refineries

Support for all facets of aluminum production—from extraction to reclamation

Supporting clients wherever deposits of bauxite are found, Tetra Tech has done extensive work around the world, but particularly in Canada. We have also worked on Alcoa's bauxite projects in Arkansas and Texas, and in Jamaica for WINDALCO.

We have decades of experience with alumina smelters and refineries, having worked on more than 60 different projects, many consecutively, taking the work through from studies to construction.

Our brownfields experience includes process engineering; water management; and engineering, procurement and construction management (EPCM) commissions for industry leaders like Alcoa, Noranda Aluminium, Novelis, General Cable, and Rio Tinto Alcan.

In Canada, process engineering and EPCM projects are our forté, and we have had partnership agreements with clients like Rio Tinto Alcan and Xstrata that lasted for more than a decade. Rio Tinto Alcan, the global leader in aluminum mining and production, is our largest client. Our offices in Eastern and Central Canada have been delivering services them since the late 1990s.

We have also taken on long-term remediation projects for clients like Alcoa, St. Croix Alumina and Sherwin Alumina that will stretch into the next decade.

Our strong team of hydrologists, hydrogeologists, geologists, and wastewater treatment experts ensure that bauxite is safely stored and that alumina producers manage water resources for smelting and refining safely and efficiently.

Our strengths also include expertise in all areas of aluminum smelting operations (potrooms, casting centers, anode paste plants, coke calcining, wet and dry gas scrubbing, material handling, and storage), as well as hydroelectric dams and power distribution systems that support smelting operations.

Our broad knowledge and understanding of smelting operations have made us the firm of choice for customers whose projects require amperage increase.



Rio Tinto Alcan, Alma Smelter, Québec, Canada – Plant Engineering

Services

Consulting and Studies

- Due diligence reports
- Resource evaluations, estimations, and modeling
- Mine engineering planning and design
- Compliant scoping, prefeasibility, and feasibility studies
- Process flow sheets and plant design
- Transportation planning and design

Engineering, Procurement, and Construction Management

- Project management
- Multidisciplinary engineering design services
- Procurement management
- Materials and contracts management
- Construction management
- Plant commissioning
- Full-service sustaining capital projects

Environment and Socioeconomics

- Baseline studies
- Social and environmental permitting
- Clean water, clean air, and endangered species regulatory compliance
- Environmental impact assessments and statements
- Monitoring of air, water, and soil quality
- Tailings management
- Water and waste management
- Mine closure and reclamation

Tetra Tech is a leading provider of consulting, engineering, program management, construction management, and technical services. The Company supports government and commercial clients by providing innovative solutions to complex problems focused on water, environment, energy, infrastructure, and resource management. With 13,000 employees worldwide, Tetra Tech's capabilities span the entire project life cycle.



Rio Tinto Alcan, Grande-Baie Smelter, potroom gas treatment; Rio Tinto Alcan, Grande-Baie Smelter, alumina handling; Rio Tinto Alcan, Jonquière Smelter, safety valves installation



Rio Tinto Alcan, Jonquière Smelter, primary hydrocyclones; Rio Tinto Alcan, Jonquière Smelter, Spent potlining plant EPCM; Rio Tinto Alcan, Kitimat Smelter, furnace repair



Rio Tinto Alcan, Vaudreuil Alumina Refinery, water management of red mud ponds system; Rio Tinto Alcan, Kitimat Works, replacement of ingot carrier in a casting center; Rio Tinto Alcan, Sebree Smelter, amperage increase

Aluminum Project Locations



- Active in mining and minerals for more than 50 years
- 1,300+ dedicated technical mining professionals
- Delivered more than 60 bauxite and alumina projects in 6 countries
- Services for complete mine life cycle
- Able to deliver long-term remediation and reclamation projects

Corporate Headquarters

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Brazil	Belo Horizonte, Minas Gerais State
Canada	Jonquière, Québec Vancouver, British Columbia Toronto, Ontario
Chile	Santiago, Santiago Province
UK	Swindon, Wiltshire
US	Golden, Colorado