

# Reference List – Lime Industry Selected Projects

Some of our most relevant projects have been selected and are presented in the following slides.

For more information please contact us at <a href="mailto:info@peccg.com">info@peccg.com</a>





# Minera Chinalco Peru S.A., Toromocho, Peru

Pre-Feasibility Study to implement a Greenfield lime plant for a US\$2.2 billion copper mine project in Central Peru: Geological assistance with the identification of adequate limestone deposits; Selection of appropriate technology to calcine the limestone; CAPEX, OPEX and Economic Analysis; Preparation of Bid Packages; Evaluation of Bids.



# Yanacocha Gold Operation, Cajamarca, Perú

Engineering Support and Feasibility Study for a new Greenfield lime plant: Assistance with preparation of Environmental Impact Assessment, feasibility study and preliminary engineering; preparation of bid package, evaluation, selection and procurement of kiln system; determine required adjustments for kiln design due to high elevation; Conceptual Study to compare new plant vs. increasing capacity of existing lime plant.



# Pascua Lama Project, Argentina/Chile

Conceptual and basic engineering: Limestone crushing and grinding plant; quick lime plant; and Limestone pulverizing plant.



# South American Gold & Copper, Chile

Feasibility Study for a Greenfield lime plant using an underground limestone deposit: Preparation of flow diagrams, selection of kiln capacity, preliminary layout drawings, CAPEX estimates, Economic Study and project evaluation to secure financing.



# Southern Peru Copper Corp., Perú

Feasibility Study, Preliminary Engineering, Process Design and Process Equipment Specifications: Increase kiln availability (reduce fines in kiln feed and change refractory); Installation of fabric filters; Capacity increase changes included: Burner (-35% primary air to 10%); Kiln cooler chute (enlarged to reduce dust pickup); Lifters (improved heat transfer); Kiln and cooler drive (fixed speed to variable speed and provided control of material loading in kiln); cooler modifications (added refractory and lifters).



# Cales del Caribe S.A. (Argos Group), Colombia

Inspection of plant re-commissioning; plant audit to maximize lime production; convert ESP to fabric filter; Engineering to support change of fuel from natural gas to coal.





### **Carmeuse, Various Locations**

-Maysville, Kentucky: belt conveyor system failure investigation and analysis; heat exchanger analysis and selection; cab tower design.

-Black River, Kentucky: Engineering and
Construction Management for new kiln dust
collector. Design of settling pond pumping system.
-Beachville, Ontario: Quarry/crushing study



### Argos, Colombia

CAPEX Study for two new lime plants comparing capital cost of vertical and preheater kilns; CAPEX Study for conversion of a cement line to lime production.



# **Graymont Inc., Various Locations**

-Cricket Mountain, UT and Pleasant Gap, PA: Two new kiln line projects; coordination of OEM mechanical and structural engineering; balance of plant mechanical and structural engineering and construction management.

-Bedford, Quebec: Provided turnkey installation including all engineering, sizing and fabrication drawings and commissioning for a new lime kiln burner pipe and complete coal system as part of a NOx reduction package.



# **Chemical Lime Company, Various Locations**

#### -Missouri, Alabama, and Utah Operations

Material handling detailed engineering; Conceptual layouts and comparative cost estimates for the material handling systems of a lime production process. The systems included all phases of lime handling from the primary crusher to the loadout system as well as systems for receiving and storing coal and coke; Layouts and estimates were developed for three different plant configurations and two geographical locations; Conducted fuel system safety inspections; Fuel systems were for coal, petroleum coke and natural gas; Used NFPA 85 (set of codes for the installation and operation of combustion systems recognized by government regulatory agencies and insurance carriers).

#### -Louisiana and South Carolina Operations

Mechanical and structural detail engineering of pneumatic conveying system for indirect firing of two lime kilns, new storage bins, material handling and preheater lance cleaning; Engineering and equipment selection for the indirect coal firing system for two Maerz shaft kilns, including pulverizing, distribution and storage; Conceptual layouts and preliminary engineering for three potential new lime plant configurations with associated plant systems, including capital cost estimate comparisons; Lime slurry tank and conveyance engineering.





#### **Puerto Rican Cement, Ponce, Puerto Rico**

Preliminary Study for lime plant and packhouse



# **United States Lime & Minerals, Inc., USA**

Engineering and project management services for second kiln line addition; Construction included limestone conveyors, new preheater tower, kiln, cooler/burner building and pebble lime transport and storage system.



# Grupo Gloria S.A., Arequipa and Puno, Perú

Process Study to convert Yura's Rotary Cement Kiln to a Lime kiln; Conceptual Study to convert two of Cemento Sur's Vertical Clinker Kilns to Lime production, including Process, Mechanical and CAPEX estimates.



# Minera Alumbrera, Argentina

Designed receiving, storage and dosing of lime for the copper concentrator; Designed storage silo and associated materials handling equipment for silo loading and unloading.



# Lafarge North America Inc., Calera, Alabama

Study to partition the Blue Circle lime facility from the cement operation. Southern Lime Company purchased the Blue Circle lime assets.



# **Confidential Client, Zambia Africa**

Conceptual Feasibility Study for a new lime plant in Zambia (undisclosed location)
Drilling program protocol for the new lime plant (Phase II Study)





# Sociedad Contractual Minera ByT, Cal Chile

Pre-Feasibility study to implement a Greenfield lime plant for a US\$2.2 Billion copper mine project in central Perú; Geological assistance with the identification of adequate limestone deposits; Selection of appropriate technology to calcine the limestone; CAPEX, OPEX and Economic Analysis; Preparation of Bid Packages.

Evaluation of Bids.



#### **North American Clients, Confidential locations**

Two wet scrubber to baghouse conversion projects; Pebble lime screening, material conveyance, screening, dust collection and storage; Mine run screening, stockpile, and reclaim.



# Ma'aden, Saudi Arabia

Conceptual Study for quicklime and limestone derivative products, including project definition, layout, CAPEX, OPEX, and economic analysis