

QUALIFICATIONS AND CAPABILITIES
MINING AND METALS



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GENERAL INFORMATION

**Family Owned
5th Generation Company**

SERVING HEAVY INDUSTRY FOR OVER 140 YEARS

Since 1875, the Eichleay companies have remained a continuous presence in the engineering and construction industries. From a structural mover — to a general contractor — to a full-service EPCM/staff augmentation firm, the one constant has always been our passion for applying innovative techniques and approaches to deliver complex projects. Today, we provide a comprehensive range of integrated engineering, architectural, project and program management, procurement and construction services.

Supported by our offices in California, Montana and Washington, we have successfully executed a diverse portfolio of projects throughout the Western United States and built ongoing relationships with a long list of world-class clients. The success of these relationships has enabled us the opportunity to build a nimble organization that is not only able to undertake projects of virtually any size and provide project delivery resources to any industry, but an organization that is comfortable translating skill sets between vastly different industries. All of this is made possible through the extraordinary skill, professionalism and commitment of our versatile team.

COMBINING THE BEST ELEMENTS

Our organizational structure enables us to provide highly responsive service that is characteristic of small firms, while also offering the depth and breadth of expertise associated with large firms. Small firms cannot match our capabilities and resources, and large EPCM firms cannot match our speed and flexibility.

**Our employees are
the key to our
success and to
the success of
our clients.**

SAFETY AND QUALITY



ZERO HARM TO PEOPLE, ASSETS AND THE ENVIRONMENT

We understand that a successful safety culture starts at the top. At Eichleay/EM&M, safety is a core value that is deeply ingrained in every aspect of our business. This state of mind is evident in all of our surroundings and everything that we do — from the office and field environments in which we work — to the deliverables that we produce. We are firmly committed to ensuring that our team members go home safely to their family at the end of every day, and that our work reflects a careful consideration for those who operate in and maintain the facilities we design and build.

EICHLEAY QUALITY SYSTEM

Eichleay/EM&M has highly effective procedures and quality systems in place to ensure control of our entire project delivery process. These procedures and systems are collectively referred to as the Eichleay Quality System (EQS) and are patterned on the ISO quality system.

YEAR	EMR	TRIR	LTIR
2018-2019	.57	0.00	0.00
2017-2018	.60	0.00	0.00
2016-2017	.61	0.00	0.00
2015-2016	.61	0.00	0.00

All of these best practices are regularly reviewed and updated in order to continuously improve the quality and efficiency of our services. Compliance with EQS is achieved through mandatory employee training sessions and random internal audits focused upon conformance to practices, the consistency of their application and the identification of corrective actions.



We remain vigilant about safety awareness by empowering all of our employees with stop work authority.



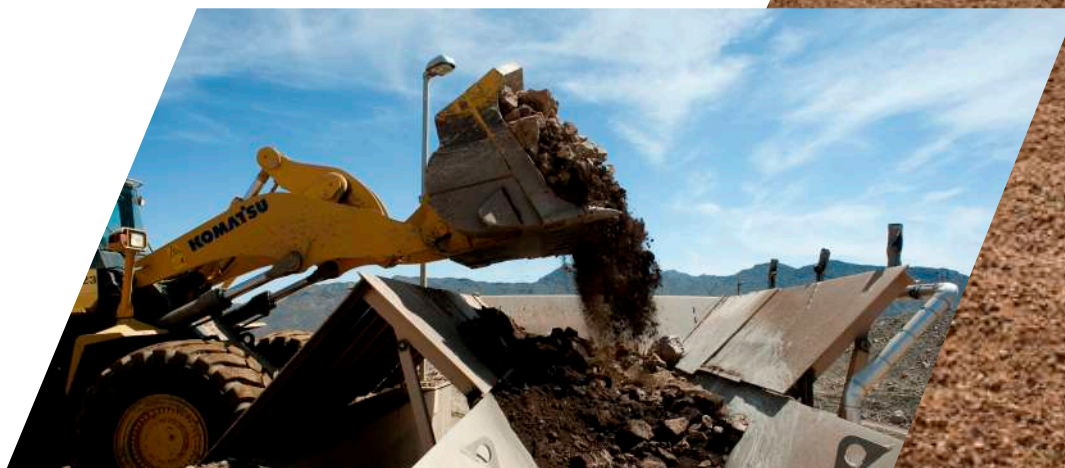
Eichleay has a long and distinguished legacy working in the ferrous and non-ferrous metals industry.

OVERVIEW

Eichleay/EM&M's mining and metals experience includes everything from small plant upgrades to full plant expansions. We are familiar with surface mining facilities and the associated infrastructure required to extract and process base metals — copper, lead, nickel and zinc — precious metals, industrial minerals — borates, phosphates, potash and soda ash — construction materials and rare earth minerals.

Our expertise includes:

- ▶ Crushing/Grinding
- ▶ Conveying/Stockpile/Reclaim
- ▶ Flotation/Gravity Concentration
- ▶ Hydrometallurgy
- ▶ Physical Separations
- ▶ Tailings
- ▶ Waste Water Treatment
- ▶ Labs and Office Facilities
- ▶ Power Distribution
- ▶ Utility Infrastructure
- ▶ General Site



PROJECT DELIVERY SERVICES



OVERVIEW

As a mid-sized Project Delivery company, we provide all aspects of Project Delivery including Engineering, Procurement and Construction Management (EPCM).^{*} Our Project Delivery services are structured into five distinct models as outlined below. Each has established work processes, procedures and guidelines that enable us to provide project delivery across all of the industries we support. Unlike the standard approach, these models allow us to focus on our client's specific needs and organizational structure.

STAFFING/SECONDMENT MODEL

- ▶ Provide Project Delivery professionals to augment client's staff
- ▶ Personnel become a part of client's staff and take direction from client
- ▶ Effective model for client's resource leveling
- ▶ Effective model to bring in skills that client's team needs
- ▶ Our staffing personnel have project delivery depth as part of our Eichleay / EM&M family

^{*} We specialize in small to midsize capital project programs and utilize our satellite offices to provide work-share opportunities to level resources, improve schedules and be local to our clients.

ONSITE PROJECT TEAM MODEL

- ▶ Eichleay/ EM&M staff housed onsite performing Project Delivery
- ▶ Efficiencies with having a dedicated team with knowledge of facility + client relationship
- ▶ Consistency with long-term staff
- ▶ Overflow capacity support from our home offices

EMBEDDED PM MODEL

- ▶ Onsite Project Management
- ▶ Engineering and Procurement performed in our home office
- ▶ Efficiencies in PM knowledge of client's site and staff
- ▶ Efficiencies in PM knowledge + relationships with our home office staff

HOME OFFICE MODEL

- ▶ All Project Delivery services are housed in the Eichleay/ EM&M home office
- ▶ Project Manager(s) assigned to the client
- ▶ Efficiencies in using Project Delivery on an as-needed basis
- ▶ Cost savings in client having no need to house personnel onsite or obligation to keep Project Delivery team busy
- ▶ Cost savings and efficiencies in our ability to level resources + deliverables

EPCM AGENCY MODEL

- ▶ Full EPCM services in an agency format
- ▶ Task Force Approach to Project Delivery
- ▶ Complete Eichleay/ EM&M team for augmentation of client's Project Delivery organization
- ▶ Responsible for the overall delivery of the project or function

PROJECT DELIVERY FUNCTIONS



Project success is dependent on the strength of each Project Delivery function. The functions that we provide are supported by Eichleay's work processes, procedures and standard tools in each field. These functions can be supplied as a complete package, or as an augmentation to a client's program.

PROJECT MANAGEMENT

- ▶ Overall Management of Project
- ▶ Management of Project Gated Process
- ▶ Development of Scoping Documents
- ▶ Development and Implementation of Project Execution Plans
- ▶ Management of Cost Estimates and Schedules
- ▶ Project Reporting

ENGINEERING

- ▶ Multi-Discipline Engineering Capability
- ▶ Engineering Services for Any Phase of Project

FIELD ENGINEERING

- ▶ Engineering Liaison
- ▶ Problem Solving/RFI Coordination
- ▶ Construction Support

PROJECT CONTROLS

- ▶ Development and Execution of Cost Control
- ▶ Development and Execution of CPM Scheduling
- ▶ Project Controls Analysis and Reporting
- ▶ Project Accounting and Reporting

PROCUREMENT/CONTRACTS

- ▶ Material and Equipment Procurement
- ▶ Expediting
- ▶ Back Charges and OCDs (Overages and Damages)
- ▶ Claims Prevention
- ▶ Contracting
- ▶ Contract Management of Change

MATERIAL MANAGEMENT

- ▶ Receiving, Warehousing and Issuing
- ▶ Equipment Preservation Management
- ▶ Traffic and Delivery of Equipment and Materials

DOCUMENT CONTROL

- ▶ Document Management and Control
- ▶ Contractor Documentation Field Audits
- ▶ Close-out Documentation

CONSTRUCTION SERVICES

- ▶ Constructibility and Construction Planning
- ▶ Construction Execution Management
- ▶ Start-up and Pre-Commissioning Planning Support

PROJECT DELIVERY SYSTEMS



WORK PROCESSES, PROCEDURES AND STANDARDS

Our Project Delivery work processes are designed to be adaptable. Every project has unique characteristics and desired outcomes. Our work processes have been developed as a guideline — or starting point — to be custom tailored to the project. Although flexible, our work processes bring a standard method for execution that allows us continuity and the ability to predict and achieve the desired outcomes. Typical components are:

- ▶ Project Scoping Documents
- ▶ Project Estimation
- ▶ Project Scheduling
- ▶ Project Communications and Reporting
- ▶ Subcontracting Plan
- ▶ Modularization Study
- ▶ Heavy Lift and Haul Plan
- ▶ Labor Studies
- ▶ Industrial/Community Relation + Safety Plan
- ▶ QA Plan
- ▶ Work Packaging Plan
- ▶ Constructibility Plan
- ▶ Completions Plan
- ▶ Site Logistics Plan
- ▶ Site Organization and Staffing Plan
- ▶ Project Risk Analysis

We have developed and maintained a repository of procedures, guidelines, forms, standards and templates that allow for a quick and consistent uptake in the project planning process. These documents have been developed through our construction experience and adoption of industry best practices.

As a Project Delivery company, we are committed to the industry concept of a construction-driven project. To achieve this, our guiding principle is that all engineering is performed with construction input and consideration. To achieve this, construction is involved from the beginning of the project effort. We feel that the most practical method to achieve a construction-driven project is through our Construction Work Packaging Process. This allows us to design and procure materials and equipment in alignment with how the project will be constructed.

PROJECT DELIVERY TOOLS



TOOLS SUITE

The right tools are deployed for each project to provide a fit-for-purpose solution. We typically utilize the tools below to support planning and field execution. Our team is highly skilled with these industry-recognized software packages; however, we understand that each of our clients draws upon a unique set of resources and capabilities and has their own preferences and requirements. As such, we are highly adaptable and accustomed to tailoring our services, systems and execution approach to meet our client's specific needs. In those instances, we will conduct a Gap Analysis to ensure a seamless process is developed and implemented.

NEWFORMA PROJECT CENTER

Eichleay uses Newforma as our Project Delivery enterprise software solution. This application allows us to electronically manage PM work processes such as:

- ▶ Project Communication (Emails, Transmittals, Submittals, Meeting Minutes, etc.)
- ▶ Document Control Management
- ▶ Requests for Information (RFI)
- ▶ Construction Impact Notifications (CIN)
- ▶ Contract Change Order Process
- ▶ Punch Lists
- ▶ Work Packaging
- ▶ Completions Packages

PRISM (COST CONTROL AND MATERIAL MANAGEMENT)

PRISM's Cost Module includes tracking the full-range of cost activities and reporting. The reporting feature can be filtered to include specific areas of information needed by the project team at any given time. PRISM's Material Management Module helps maintain tight control on the warehousing activities, allowing the user to track the receipt, location, and issuance of items, as well as reporting.

PRIMAVERA P6

P6 is the industry standard for project planning and scheduling. We are prepared to use Primavera or Microsoft Project depending on the client's needs.



▶▶ **We look for individuals with a passion for their career, the ability to effectively communicate in a team environment and drive to take on new challenges.** ◀◀

RECRUITMENT

We recruit professional personnel for opportunities within our offices, CM assignments and for staff augmentation positions within our clients' facilities. Our modern applicant tracking system — along with our robust recruiting process — allows us to recruit and deliver the ideal candidate for your position. When our clients need staffing, we respond to their dynamic needs by offering a flexible workforce from hire to payrolling. We are able to assist them with direct hire and contract-to-hire positions, for long or short-term contracts. We use our many resources to select the best candidates for the desired positions.

LIVE DATABASE

We maintain an extensive database of qualified personnel, and can staff positions in all of the traditional engineering and design disciplines, as well as project engineering, project management, project support, procurement, construction management, administrative, safety, technician, planning and other specialized services. Our Live Database is very unique for the reason that we contact candidates on a quarterly basis to check-in with and update them on our current projects and what opportunities are coming up that might fit their qualifications.

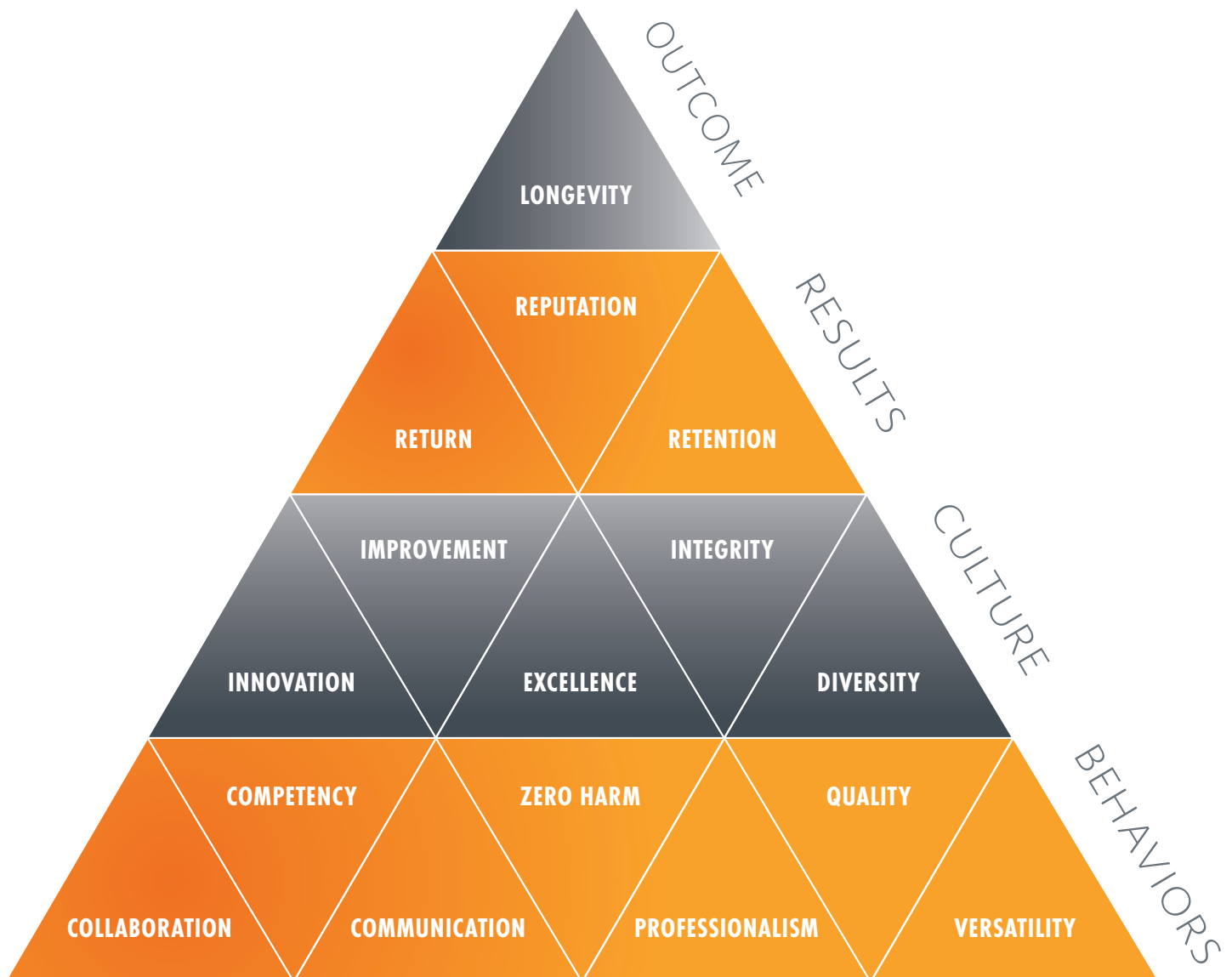
EMPLOYER OF CHOICE

We offer opportunities for a challenging and rewarding career in a friendly, professional environment. Our team works with a diverse industry and client base, and we provide ample opportunity to develop experience in new areas.

Whether employed in-house or working under the direction of our clients, all of our personnel are considered regular employees and participate equally in our benefits program. We provide opportunities to our employees for movement between field assignments and in-house positions to broaden their experience and expertise.



Our Values Framework is the core of our company's identity.



The Eichleay Values Framework identifies the behaviors that define our culture, drives results and supports our overall desired outcome: **LONGEVITY**.

We embrace this value structure as a project delivery company — including staff augmentation — to drive results that provide industry-best services to our clients.

▶▶ Eichleay considers project delivery knowledge, technologies and experience a key to project success and a differentiator in our industry. ◀◀

ORGANIZATIONAL STRUCTURE

Our organization enables us to provide highly responsive service that is characteristic of small local firms, while also offering the depth and breadth of expertise associated with large firms. Small local firms cannot match our capabilities and resources; large EPCM firms cannot match our flexibility. Eichleay offers:

- ▶ Five uniquely focused Project Delivery models for your project
- ▶ Offices strategically located to serve our clients
- ▶ Industry leading safety performance and culture
- ▶ Full complement of in-house design professionals and the ability to provide support for virtually all Project Delivery functions
- ▶ Single point of contact for fully integrated EPCM from concept to completion
- ▶ Highly responsive, experienced and qualified team focused on client's needs
- ▶ Broad network of strategic relationships including equipment vendors, fabricators, contractors, consultants and specialists
- ▶ Access to the best resources and pricing on our client's behalf through long-standing personal relationships with marketplace key players
- ▶ Ability to provide the best attributes of a flexible staffing agency and project delivery expertise expected from your EPCM contractor
- ▶ Continuously in business for 140+ years
- ▶ Access to and knowledge of industry best practices and metrics
- ▶ Longstanding relationships with best-in-class clients



RELEVANT PROJECT EXPERIENCE

Molycorp — Project Phoenix | Mountain Pass, CA



Total Installed Cost: \$1.5 Billion | Peak Construction Manpower: 1,700

SERVICES PROVIDED

Overall Program Management with responsibilities including engineering coordination, procurement, construction management, technical support, project controls, safety, quality assurance and document management.

PROJECT DESCRIPTION

Major expansion and modernization of Molycorp's flagship mine to make it the world's most technologically advanced energy efficient, environmentally superior rare earth production facility in the world. Key components of this multi-year upgrade include crushing, milling, cracking, tailings facility and storage, separations, chlor alkali plant, water and waste water treatment, ancillary facilities, 50 MW combined heat and power plants, as well as significant power distribution, distributed utilities and control systems infrastructure.

PROJECT STATISTICS

- ▶ Over 5.6 million man hours without a loss-time accident
- ▶ 15 process units over 86 acres
- ▶ Coordination across nine engineering service providers
- ▶ Administration of 33 construction contractors
- ▶ Over 40 service and consulting contracts written
- ▶ Over 2,000 pieces of owner-procured equipment
- ▶ Close to 11 million CY of earthwork handled
- ▶ 70,000 CY of concrete placed
- ▶ Over 10,000 tons of steel erected
- ▶ Over 6,000 feet of pipe rack installed
- ▶ 2,000 feet of conveyor systems installed
- ▶ Total of 20 field fabricated tanks, clarifiers and thickeners
- ▶ 500,000 LF of piping installed
- ▶ 84,000 LF of electrical cable tray
- ▶ 3.4 million LF of cable/wire pulled
- ▶ 3,500 owner-procured instruments
- ▶ Over 8,000 instruments installed including vendor and contractor supplied

RELEVANT PROJECT EXPERIENCE

Molycorp — Ancillary Facilities | Mountain Pass, CA



SERVICES PROVIDED

Architectural, Engineering, Estimating, Scheduling, Project Management and Construction Support.

PROJECT DESCRIPTION

Eichleay provided engineering and architectural design services for major site-wide expansion and modernization of a rare earth mining site and adjacent minerals production facilities. Buildings included:

TRUCK MAINTENANCE SHOP

23,000 sf steel building with heavy duty vehicle repair bays; high pressure wash bay; 20 ton dual hoist bridge crane; lubrication and oil storage facilities with piped distribution systems; and oily water and sludge separators.

MINING EQUIPMENT REPAIR SHOP

5,300 sf steel building provides repair and maintenance area needed to service mining equipment. The facility includes repair bays, hoist lifts, electronics repair areas, offices and a restroom. Facility was designed specifically for equipment to be repaired and includes pumps, compressors, valves and various other mining production parts/components.

SHOWER AND LOCKER FACILITIES

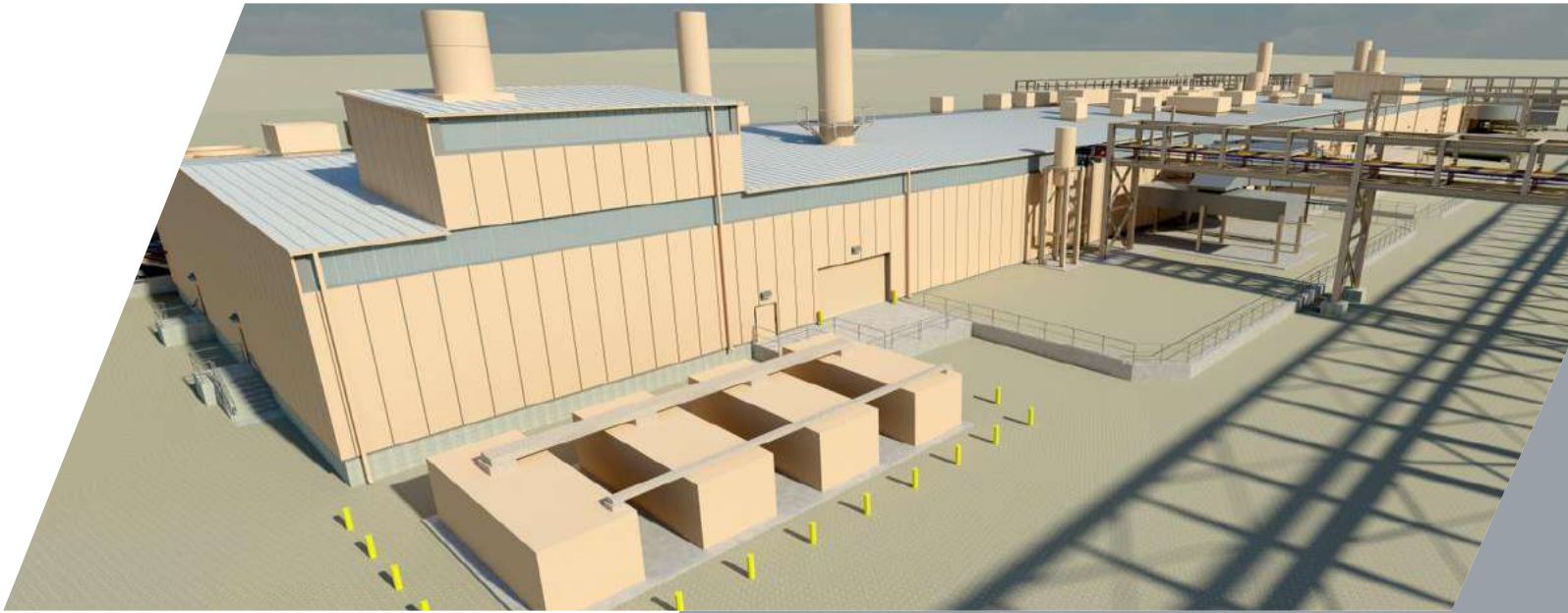
One 9,200 sf and one 4,700 sf steel building, each serving mining personnel at different areas of the project site. Complete with locker rooms, shower rooms, full-service laundry facilities, support offices, conference rooms, and employee break rooms.

FIRE WATER PUMP HOUSE

New 1,500 sf pre-engineered metal building to house water pumps, piping and pumping equipment which services the mining mill and minerals production facilities.

RELEVANT PROJECT EXPERIENCE

Molycorp — CHP Plant | Mountain Pass, CA



SERVICES PROVIDED

Architectural, Engineering, Estimating, Scheduling, Project Management and Construction Support.

PROJECT DESCRIPTION

Eichleay provided engineering and architectural design services for this project in 2010–2012. The project included a 50,000 sf Combined Heat and Power Building housing four 15 megawatt natural gas powered turbines and heat recovery steam generators for a 300 psig steam system. The building included a control room, electrical, battery and inverter rooms, chiller room, chemical feed storage room, site network room, covered gas train area, exterior generators, cooling towers, ammonia storage and containment area. Design features included de-aerator penthouses, pipe rack coordination, exterior truck load-out area with spill control features.



RELEVANT PROJECT EXPERIENCE

Searles Valley Minerals — Boric Acid Plant | Trona, CA



Total Installed Cost: \$35 million

SERVICES PROVIDED

Engineering, FEL-3 and Detailed Design

PROJECT DESCRIPTION

SV Minerals uses solution mining and crystallization techniques to produce boron, among other minerals. This element currently feeds a Boric Acid processing train built in the early 1960's. The existing Boric Acid Plant had reached the end of its useful life because of the length of service and consistent high throughput. It was necessary to replace it in an unoccupied area adjacent to the existing plant. Eichleay's scope included the detailed engineering work packages (EWPs), as well as equipment and construction purchase packages. The new plant included upgraded new crystallizers, heat exchangers, settlers, barometric condenser, centrifuges, pumps and tankage.

RELEVANT PROJECT EXPERIENCE

Inco Limited (Vale)



THOMPSON GAS CLEANING SYSTEM

Eichleay performed a feasibility study to analyze smelter performance with imported concentrates under new Provincial regulations. Eichleay analyzed roaster, electric furnace, and converter operation with new concentrates, performed minor element balance, evaluated hot precipitator performance. Eichleay performed an analysis comparing contemporary and future operation against future Provincial regulations and required modifications and developed a cost estimate and schedule for program modifications.

COPPER CLIFF SMELTER

Eichleay provided consulting services for Matte Processing Area upgrade, including revised roaster operation, installation of a new wet gas cleaning system, and modification of an existing 2900 mtpd sulfuric acid plant. Specific services included P&ID, PFD and mass balance reviews; HAZOP participation, vendor bid negotiations/reviews and operability reviews.

RELEVANT PROJECT EXPERIENCE

AK Steel — Rockport Works | Rockport, IN



Total Installed Cost: \$1.1 Billion | Peak Construction Manpower: 3,000

SERVICES PROVIDED

Engineering, Procurement, Construction Management and Overall Program Management

PROJECT DESCRIPTION

Greenfield carbon and stainless steel finishing facility that encompasses more than 1,750,000 sf of buildings. It utilizes state-of-the-art manufacturing technologies, including Automated Guidance Vehicles (AGV) and automated cranes to move the steel through the various finishing operations.

KEY FEATURES

- ▶ Carbon and stainless continuous pickling line
- ▶ Stainless continuous annealing and pickling line
- ▶ Carbon and stainless continuous cold mill
- ▶ Continuous hot dip galvanizing and galvannealing line
- ▶ Hydrogen annealing and temper rolling facilities

EICHLEAY CONTACTS



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