



**Klohn Crippen Berger**  
60 YEARS

# Australian Operations

Mining Environmental Group



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# So, you're thinking of joining?



1. We acknowledge that Klohn Crippen Berger (KCB) may not be a familiar name, but it is a respected one – and, we need to alleviate concerns you may have that we're a "small, unknown operation".
2. You need to understand our history, our business, our clients, our services, our structure, our regional presence, our culture, and our future, to make an informed career decision.
3. You also need to understand where you'd fit into the group in Australia, and what growth, career and travel opportunities might become available in the medium to long term.

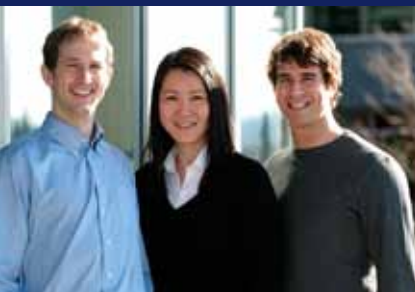
## Our History

Klohn Crippen Berger is built upon the global experience of its founding firms which, for 60 years, have earned a reputation for quality service and innovation. We are the recipient of over 50 national and international awards.

## Awards



PSMJ Resources, Inc.



AWARD FOR NATURAL RESOURCES,  
INDUSTRY & ENERGY  
Nam Theun 2 Hydro Project



GOLD AWARD  
Antamina Mine



Presented by  
PSMJ Resources, Inc.

Awards 2010



AWARD OF MERIT  
Nam Theun 2 Hydro Project



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# Our Business – Overview



## Global Operations:



Our Corporate office is in Vancouver, Canada with other Canadian offices in Alberta and Ontario. Our International offices are in Brisbane and Perth, Australia and Lima, Peru. We service Asia, the Pacific, Australia, South and Central America and Africa. Our lines of business have developed into three key areas:

- Power and Transportation (bridges, tunnels, power stations, major infrastructure, global operations)
- Alberta (oil sands, oil & gas, water resources, environmental)
- Mining Environmental Group (geotechnical, civil, water resources, environmental, and sociology)

Klohn Crippen Berger currently employs 460 people, with about 170 staff in the Mining Environmental Group (MEG).

The MEG operates globally and services the full Pacific Rim, Canada, Australia, Asia, and South America.



# About Klohn Crippen Berger

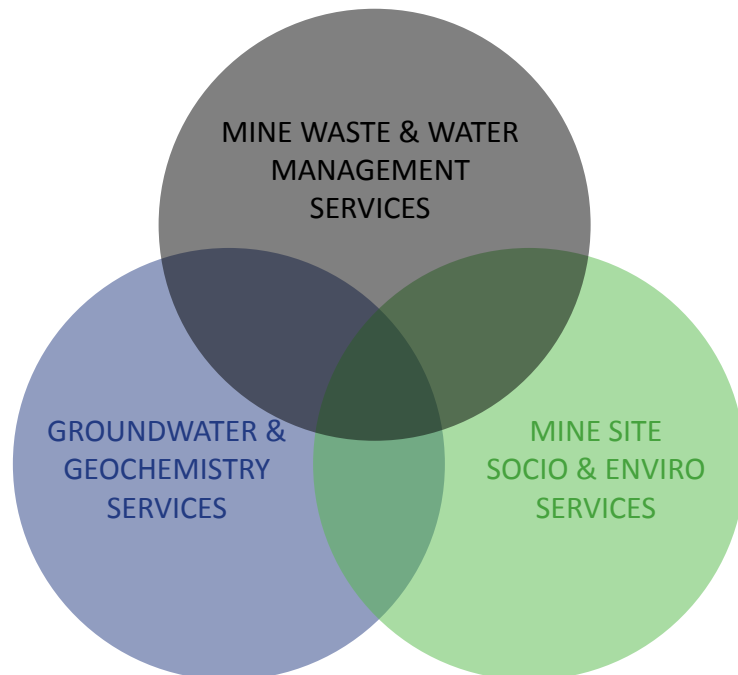


The Mining Environmental Group operates out of 5 offices:



## MEG Services:

MEG's focus is mining, with three core areas of service



# Mine Waste & Water Management Systems



## Tailings Disposal Design:

- Site selection and evaluation – technical merit and risk based ranking
- Comprehensive investigation and design of dam embankments.
- Design of water release facilities and water handling.
- Tailings deposition modelling and strategy development for tailings co-disposal.
- Water management integrated with settling, consolidation and water release properties.

## Waste Rock Dump Design:

- Investigation and design of waste rock dumps,
- Developing strategies and construction methodology for segregated dumps to store acid forming waste (and other contaminants) and provide containment of ARD.
- Geotechnical stability and material balance considerations
- Hydraulic profiles and seepage and water management studies

## Engineered Cover Design:

- Optimum engineered cover based on site climate and water quality targets.
- Store & release, to water shedding and multilayered oxygen barrier covers.
- Climate/soil/vegetation interaction, infiltration, geochemistry and oxygen diffusion.

## Earthworks and Foundation Construction Monitoring:

- Earthfill dam embankments, diversion channels, foundation excavation / construction.
- Design, preparation of development technical specifications and drawings.
- Construction supervision (including quality control), operation maintenance and closure.

## Surface Water Assessments

- Catchment mapping, runoff assessments, storage site selection, stage-storage curve development, storage performance – using various climate scenarios.
- Diversion drainage including IFD and PMP analyses, and channel design using including analysis of construction materials - concrete, rock-rip rap, earthen or vegetated.
- Clean / dirty water management using models such as SEDCAD and MUSIC
- Design of storage systems, evaporation minimisation schemes, pipe / pump systems.



*Mine Access Road*



*Field Testing and Analysis*



*Night drilling, Papua New Guinea*



# Groundwater & Geochemistry Services



Ground water testing programs



River and Hydrolic analysis



Ground water monitoring

## Total Water Management Solutions:

- Local to regional groundwater studies including field campaigns for data collection.
- Geological modelling and hydrogeological conceptualization studies.
- Water balance investigations, often coupled with geochemistry modeling.
- Groundwater – surface water interaction studies, and identification of GDEs.
- Predictive modelling studies using a range of tools – Feflow, Modflow, GoldSim, Winflow etc– coupled with comprehensive data-basing and spatial data management.
- Permitting, licensing and approvals.

## Mine Water Supply (Groundwater):

- First pass exploration to detailed bore field design including impact modeling.
- Production and monitoring bore design, installation and commissioning.
- Completion and performance reporting, rehabilitation advice and reticulation design.

## Dewatering & Mine Closure Design

- Pit shell, mine void or excavation and geological model construction.
- System design and commissioning, performance monitoring and operational advice.
- Post mining pit lake development and long term water quality and water balance.
- Final landform simulations and facility mitigation design for operation and closure.

## Water Balance

- Site wide or facility specific, simple analytical to complex Monte Carlo-based GoldSim assessments with options for deterministic and probabilistic predictions.
- Capability to couple with numerical modelling and geochemistry/water quality.

## Geochemistry & Hydrogeochemical Modelling

- Acid Rock Drainage/Neutral Mine Drainage assessments for waste rock, tailings, slag, fly ash and mining voids (pits and underground).
- Water quality assessment for fitness for use or discharge.
- Geochemical input for design/operation of waste facilities, mitigation of mine water impacts, closure study support and geochemical inputs into EIS/EIA/ESIA programs.
- Analytical and empirical water quality models.
- PHREEQC and Geochemists Workbench modelling to determine water quality processes, predict water quality and understand mobility/attenuation of metals and salinity
- Integrated water balance/water quality models in GoldSim and other platforms.



# Mine Site Socio & Enviro Services



## Community and Stakeholder Relations

- Create life of mine multi-sectoral stakeholder engagement plans.
- Facilitate with government, proponent and communities of interest.
- Provide training on early engagement processes and messaging.

## Baseline Studies & Permitting

- Coordination and completion of multidisciplinary environmental and social studies.
- Development and implementation of monitoring programs.
- Identification of permitting requirements and options.
- Development of permitting strategies and long-range scoping for permit acquisition.

## Social Environmental Impact Assessments (SEIAs)

- For regulatory approval, project financing and corporate governance purposes.
- Integration of project design with baseline studies to assess impacts and optimize mitigation opportunities.

## Audits and Risk Assessments, and Environmental Management Plans (EMPs)

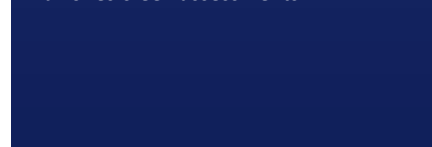
- Use of risk assessment as a decision making tool for planning and mitigation.
- Conducting risk assessment workshops and preparing risk management plans.
- Preparation of construction and operational EMPs.

## Mine Closure and Rehabilitation

- Compilation of integrated mine closure strategies and plans.
- Rehabilitation plans for structural and geochemical stability after closure.
- Incorporating environmental and social factors into final land and water use for the site.
- Compilation of environmental rehabilitation designs.
- Optimising opportunities and minimising long-term risk.
- Comprehensive cost estimates.



*Arid zones creek assessments*



# Where are we working right now?



*River crossing, Papua New Guinea*

## Active Projects

- Australia
  - Queensland, New South Wales, Western Australia
- Papua New Guinea
- The Philippines
- Fiji
- Recently worked in Vietnam and Tanzania
- New Caledonia
  - Brisbane staff secondments
- Canada
- Peru
- USA
  - Alaska
- Mauritania (Africa)



*International Opportunities*



*Field sampling*



# So, what's in it for me you ask?



## Package Offer

- Competitive base salary, above industry standard for city-based engineering and environmental consultants. Strong benefits package, which includes:
  - 15% total superannuation, not just the statutory 9%, with no co-contributions required.
  - Life insurance coverage at 2x your TRP.
  - Income protection insurance after 30 days at 75% TRP to the age of 65.
- Plus, nearly all positions qualify for overtime for project work, which is formally recognized and is either accrued, or paid out, at your discretion.
- Office-based position but travel opportunities.
- Strong Australian dollar at the moment.

## Work Opportunities

- Stay within the Australian office and work in the Australian, Asian and Pacific region.
- Short-term secondment from Australia into our other MEG offices for up to 3 months. Long-term transfers to our other MEG offices (2-3 years) with entry visa and relocation after you are done in Australia.
- Permanent residency applications and financial support if you decide to stay in location.
- Relocation support provided, and repatriation to Canadian or other MEG offices once term is complete.

## Professional Growth

- Training and development programs in place
- Conference and seminar presentations encouraged
- Non core technical training also provided, e.g. First aid training, 4WD training course for field operatives, technical writing courses, etc.
- Mentoring program
- Growing company with advancement opportunities for dynamic and dedicated individuals.



# Australian Office Culture



Our Australian offices are very open and vibrant work environments, with a young group of high caliber professionals, most with global mining experience

## Regular meeting forums:

- Internal weekly office meeting
- Internal monthly marketing and prospect meeting
- Weekly conference calls with all MEG office groups
- Annual MEG strategy sessions for senior staff held at unique locations around the world

## The office is regularly kept apprised of:

- Operating performance (WIP, A/R, utilisations, financials, etc)
- Marketing and business development efforts
- Business development
- Hiring activities
- Growth targets
- Company initiatives

## Social Calendar

- Cricket and footy days
- Annual camping trips
- Social drinks and get togethers
- Christmas party



# Our Contact Details



## Brisbane office

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Visit our website for further company information and a listing of our current openings across the company, including position descriptions, at:

[www.klohn.com](http://www.klohn.com)

*To apply for any of our openings on line go to [www.klohn.com](http://www.klohn.com) careers page*

Please also visit us on:



We look forward to discussing opportunities with you!





Through our association with Louis Berger, a leading infrastructure engineering, environmental science and economic development consulting operation, we have access to a broad depth of specialized technical expertise in over 100 offices worldwide.

[www.klohn.com](http://www.klohn.com)



OFFICE LOCATIONS

AUSTRALIA Brisbane | Perth

PERU Lima

CANADA Vancouver | Calgary | Edmonton | Saskatoon | Sudbury | Lloydminster | Inuvik | Castlegar