ANSTO Minerals has undertaken a significant amount of work on the processing of base metals minerals to produce saleable products. This experience includes process development, operation support, and plant design.

The majority of this work has been conducted on sulphide concentrates, but also work has been performed on other sources such as oxides, carbonates and silicates.

ANSTO Minerals' expertise in process flowsheet development includes the application of roasting, leaching (both atmospheric and pressure including HPAL and POX), impurity removal by precipitation, ion-exchange, solvent extraction and cementation, through to the production of metallic, carbonates and oxide products. We have also contributed to the scale up from bench scale test work to demonstration plant scale.

Laterite processing via HPAL for the recovery of cobalt and nickel, including high density sludge (HDS) for improving water balance, was feature of our support to WA-based Ni operations.

Impurity control has been extensively investigated by our team and we have developed and implemented processes in base metal operations to control soluble silica and iron in incoming feed.

ANSTO Minerals has conducted a significant amount of process modelling and scoping level engineering to support our base metal clients. We have developed detailed process models using Ideas™ (Limn™ and METSIM packages also considered) followed by techno-economic evaluation of processing options.

About ANSTO Minerals

ANSTO Minerals has a 40-year track record of providing practical solutions and innovative technology to the mining and minerals processing industries. We are a team of 60+ professional scientists and technicians with expertise covering chemical engineering, metallurgy, mineralogy, chemistry, geology and radiation safety.

We provide review and consulting services, process development services as well as collaborative and contract research on uranium, rare earth and specialty metals processing, radioactivity control and management, novel flowsheet design and modelling, and scoping level engineering / cost estimates.