Project Profile

BHP Smelter Shutdown

Client	BHP Billiton
Location	Kalgoorlie, Western Australia
Duration	June 2008 - Current
Contract	Furnace Dismantling & Disposal of Scrap and Waste Materials
Cost	$2.9 Million

Project Overview

Dismantling and rebuild of a furnace, including segregation of reusable items and disposal of scrap and waste materials.

McMahon Services received a phone call from BHP Billiton on a Friday and were asked to respond to an emergency call out at the Nickel Smelter in Kalgoorlie. Within less than 24 hours McMahon Services had management on-site to assess the site and scope of works. The project called for the dismantling and rebuild of a furnace including the segregation of reusable items and disposal of scrap and waste materials.

An initial start-up team were inducted on Saturday before a complete team arrived on Sunday for their induction. Over the weekend, McMahon Services mobilised plant and equipment to the site, ready to begin work on Monday morning.

Project Details:

- Receive and segregate sections of furnace structure for either re-use or scrapping
- Segregation and stockpiling of Furnace refractory into the following categories:

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Nickel matt (between 45% to 75% nickel content) to be crushed for re-smelting

Ferro Nickel (to be put back through furnace but cannot go through crusher)

Nickel impregnated brick (Approx. 9% Nickel) to be either sold as is or crushed and put back through Smelter

Clean Refractory to be disposed of for recycling

Chromium Alumina bricks (these are contaminated material and have to be sampled then a disposal plan formatted and put into place)

Scrap steel (sold to a licensed Metal Recycler) Refractory dust (High in Nickel and to be put back through Furnace)

- Remediation of Clay lined Pond including the following:

Sampling and testing for contaminants

Undertaking of trials to work out procedures and re-agent requirements to fixate contaminated material down to an acceptable leachate level to allow disposal as Class 2 contaminated material

Setting up of Reterra and blending of contaminated material and re-agents until the required leachate levels are reached to allow disposal to a Class two licensed Landfill site

Disposal of the contaminated material

Validation of the excavation

Backfill and compaction of the excavation

- Grit Blasting and painting of structural components of the Furnace
- Segregation, transportation and disposal of copper cooling jackets (approx $3m in value)
- Segregation, transportation and disposal of scrap steel
- Plant hire
- Labour hire