

WALTERS

PFA Disposal Scheme, North Quarry, Aberthaw



Project:

Phase 3A Cell Preparation, North Quarry, Aberthaw, Nr Barry.

Client:

RWE Npower

Value:

£1.25 million

At-a-glance:

- Bespoke
- Principal Contractor
- Break out and process 120,000m³ of rock in quarry floor
- Place 23,000m³ of CQA Plan compliant drainage layer produced at site.
- Place and compact 74,000m³ of attenuating ash layer

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Walters is accredited to ISO 9001 for Quality Management, ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health & Safety.

Challenges

A redundant section of an existing limestone quarry required preparation to accept the deposition of PFA from the nearby coal fired Power Station.

The previous phases were being rapidly filled and any delay in placement of the material would have a detrimental effect on the Power Stations ability to generate energy. The proposed Phase 3A works were forbidden to impact upon the PFA deposition on the neighbouring cells.

Solution

RWE Npower engaged Walters as Principal Contractor to construct the required PFA cell. The scheme required the excavation and re-profiling of the quarry floor to designed gradients to enable the proposed deposition material to drain freely. The quarry walls also had to be re-profiled to a 1:3 gradient and the project also required the installation of a welded liner and the deposition of a mineral layer for the attenuation of the heavy metals within the PFA.

Using the excavated rock, Walters produced to Construction Quality Assurance Plan specification, a drainage barrier layer which was deposited on the quarry sides and floor using machine controlled and GPS enabled plant.

A thorough 'rock excavatability' assessment was crucial to ensure utilisation of the correct plant, however, it became apparent that rock strengths and bed thicknesses varied substantially over relatively short distances and this required a fully flexible approach regarding suitability of plant, methods of extraction and projected outputs.

Walters worked closely with client RWE Npower and were able to quickly mobilise and deploy suitable plant from its extensive fleet ensuring the project was completed on time and the deposition of PFA was never threatened. This was despite having to deal with highly weather susceptible material, variable rock deposits and qualities and a stringent CQA Plan endorsed by Natural Resources Wales.