

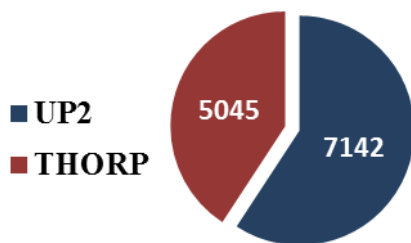
21Today. Sellafield's THORP reprocessing plant - A Lame Duck and Loser

As anniversaries go, the 27th March 2015 - which marks 21 years since THORP chopped up its first batch of spent nuclear fuel - warrants little celebration. Opened in 1994, the £2.85Bn plant had been dubbed by BNFL as the Jewel in Sellafield's Crown and a World Beating Flagship Plant that would reprocess 7000 tonnes of fuel in its first ten years, win more overseas business and make a profit of £500M in that first decade. Now scheduled to close in 2018, the Jewel has been tarnished beyond recovery by a catalogue of accidents, poor performance and business loss.

The record of the last 20 years exposes the true worth of those BNFL claims and, as the statistics below show, vindicates the major challenges to THORP's opening launched by local, national and international campaigners.

As a 'world-beating flagship' THORP's record against the comparable French plant at La Hague speaks volumes. For despite an annual design capacity of 800 tonnes compared to THORP's 1200 tonnes, the French UP2 plant still managed to outstrip THORP by a wide margin over the ten-year period 1994-2003 inclusive.

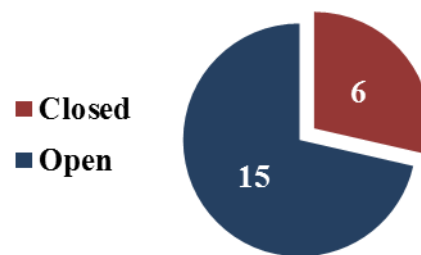
Tonnes Reprocessed



THORP's failure to reprocess the projected 7000 tonnes – by almost 2000 tonnes - in the first ten years resulted from a catalogue of unplanned closures over the decade, the first striking within days of the plant's opening when a spillage of nitric acid ate its way through cables and instrumentation and forced a shut-down of several weeks. The official down-playing of the extent and consequences of the leak was to become a common feature of many future accidents and unplanned stoppages which, when added to the planned outages, have contributed to a major loss of operational time over the last 20 years – and resulted in the 7000 tonne baseload contracts

being completed only in December 2012, some 9 years late.

Operational Years 1994-2014



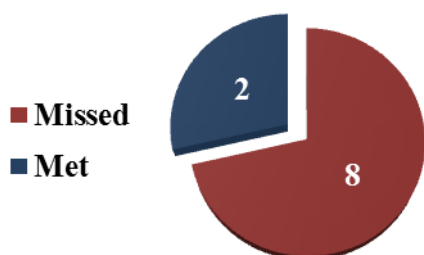
Almost three of those lost years are attributed to the 2005 leak of 18,000 litres of dissolved fuel which, despite warnings and alarms, was ignored by workers for nine months before action was taken. Rated at Level 3 on the International Nuclear Event Scale, the accident cost BNFL significant loss of face, a Crown Court fine of £500,000, permanently cut THORP's future spent fuel throughput by almost 50% and was described as being 'a failure worthy of Homer Simpson'.

Other stoppages have included replacing corroded dissolver baskets, pipe leaks and blockages, equipment failure and plant closure enforced by the Regulator (NII, now ONR) relating to the management of THORP's liquid high level wastes

The operational restrictions enforced by these events have been a major factor in the almost routine failure by THORP to meet its annual targets - some by a large margin – a failure rate that has increased since plant ownership was transferred to the NDA in 2005.

As a further damning indictment of THORP's under-performance, these missed annual targets - set recently at around 400 tonnes per year, are but a pale shadow of BNFL's original claim that THORP would reprocess 1000 tonnes per year in the first ten years of operation (a design target not once achieved) and 800 tonnes per year thereafter – now wholly out of THORP's reach.

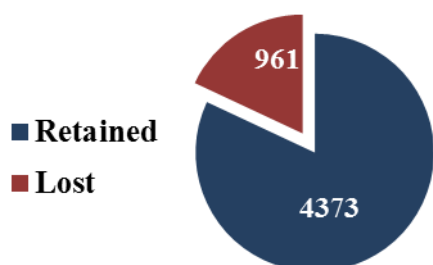
Annual Targets 2005-2014



Little wonder then that overseas customers from whom two-thirds of the plant's baseload order book had been secured, soon lost faith in THORP and patience with Sellafield's management of the plant. At a meeting in 2000, frustrated customers complained of BNFL's inability to reprocess their fuel within the contracted timeline, and annoyance at the ever rising costs being forced on them by BNFL including the additional charges being levied for plant repair and refurbishment needed after equipment failure and accidents – the blame for which they placed firmly at Sellafield's door.

Against this background it is unsurprising that those customers – whose continued support was being relied on by BNFL - were unprepared to give THORP any further business. Indeed, rather than securing a single new contract from overseas as originally projected, contracts from German utilities were cancelled in the plant's first year of operation – losing BNFL an estimated £250M. Further overseas contracts were abandoned subsequently, with almost 1000 tonnes of overseas business lost in total.

Overseas Orders [tonnes]



A majority of the losses came from German utilities who, by 2005, had opted to store their spent fuel at the power station site rather than have it reprocessed, an option that had cost them dearly.

When summarised, THORP's poor reprocessing performance together with years lost through unplanned stoppages, the failure to meet targets and the loss of contracts and customer confidence paint a picture of a plant that bears no resemblance to the world-leading flagship image portrayed by BNFL 21 years ago. The only 'attribute' still to be qualified is the claim of THORP's £500M profit in the first ten years of operation.

THORP Profit/Loss



Though the repeated refusal by Sellafield to publish individual accounts for THORP raises its own suspicions, the plant's profitability was clearly dented by the Government's 1-year delay in approving plant opening which BNFL complained was losing THORP £2M per week'. This loss of some £100M – plus the £260M loss of those early German contracts leaves little of the projected £500M profit intact. Any balance will have been further eroded by the loss of further overseas business and the costs of accidents – the 2005 leakage accident estimated by the NDA to have resulted in £112M of lost revenues

Whilst its faltering performance and inept management has badly holed the overrated flagship below the waterline, the views of an ex-BNFL Director who was heavily involved in the battle to open THORP, add a further dimension. In his book Inside Sellafield, the long serving Harold Bolter suggests that the figures fed into the plant's economic case by BNFL *'have turned out to be incorrect in several important respects'* and more tellingly that *'if the highly complex plant fails to operate to its projected standard, it will become a huge financial drain on the nation'*.