NDA Sellafield Programme Director

Report to WCSSG

Tuesday June 9 2015

Cleator Moor Civic and Masonic Centre
Overview

During 2014/15, the Government approved the NDA’s recommendation for a change to the way Sellafield is managed.

This followed a detailed review by the NDA which concluded that the complex technical uncertainties at Sellafield site meant the Parent Body Organisation model was no longer the best way to achieve the progress everyone desires.

Under the new arrangements, Sellafield Ltd will acquire a ‘strategic partner’ from the private sector to assist in its delivery rather than operate under the temporary ownership of a PBO.

A 12 month notice of termination of the current PBO contract with Nuclear Management Partners (NMP) was issued on 31 March 2015. Work is continuing to ensure a smooth transition into the new management model.

During transition, the key objective of all partners is the continued safe operation of the site and the continuation of progress, particularly on the decommissioning programmes in the high hazard areas.

With this in mind, it is particularly pleasing to be reporting on a year of very good performance at Sellafield, with the operational plants performing well, important progress being made in the major decommissioning programmes and another impressive year for safety.

Industrial safety

The improving trend of recent years in conventional, nuclear and environmental safety at Sellafield was maintained during 2014/15 with the best ever performance for the site, which continues to outperform national industry norms.

Sellafield Ltd’s (SL) continuing commitment to site safety yielded an impressive nine gold awards at the 2014 Royal Society for the Prevention of Accidents (RoSPA) Occupational Health & Safety Awards.

In the Decommissioning division, a total of five million man hours have now been clocked up without a Lost Time Accident (LTA) – a tremendous achievement for an area of the business which contains some of the most hazardous facilities in the UK.

One area which fell below these high standards was radiological safety with the site exceeding the target for personal contamination incidents. The NDA expects SL to give a renewed focus to this area, fully investigating the reasons and acting on any findings. As retrievals from the legacy facilities gather pace over the next few years, it is imperative that safety remains the overriding priority.
Operational plants

Magnox Reprocessing

Magnox Reprocessing has enjoyed its most impressive year for some time with a total of 523te of fuel decanned during the year – exceeding its target of 520te.

The plant recovered in full from losses made during an unplanned outage in the final months of the previous year and bounced back strongly from a further unplanned outage in September 2014.

It is pleasing to see the team at Magnox recovering quicker and smarter to disruptions in production which will always be a feature of life in a 50-year-old plant. The improvement themes identified by the Magnox Throughput Improvement Plan, initiated by the NDA, are clearly bearing fruit and I will be keen to see this progress maintained during the final years of the plant’s life as we approach its closure in 2020.

The plant continues on track to meet the performance range required to complete the Magnox Operating Programme.

Thorp

Thorp again experienced a number of unplanned outages during the year which disrupted production and led to its target of 439te being missed.

A total of 386te of fuel was sheared in 2014/15 which is sufficient to maintain the strategic objective of completing reprocessing in THORP in 2018. However SL must remain focused on improving responses to periods of disruption.

Vitrification

The Waste Vitrification Plant (WVP) has enjoyed an incredibly productive year producing 1,503te of vitrified residue – well in excess of its target of 1,408te.

This is all the more impressive when you consider that, in addition to this, SL safely completed a long period of decontamination in Line 3 following an event in November 2013.

The team at WVP deserve huge credit for the way they battled back from that setback and have powered ahead since. I hope to see this strong performance maintained during 2015/16.

Legacy Ponds and Silos

Pile Fuel Storage Pond

Last year I reported on a pleasing momentum building in the PFSP programme and I've been delighted to see this momentum continuing to gather pace during 2014/15.
Decades-old fuel and equipment is leaving the facility on a daily basis as the team at PFSP continue to demonstrate how the application of the ‘decommissioning mind set’ - a pragmatic approach that relies on off-the-shelf solutions, problem-solving at the workface and driving forward on multiple fronts – can deliver progress even in the most challenging environments.

During 2014/15, 107 cans of oxide fuel were removed and sent to the Active Handling Facility. Metal fuel is continuing to be consolidated and stored in skips ready for export.

PFSP remains on track to be emptied of its inventory and ready to be drained of water by the end of this decade - a remarkable achievement given that the original date for this was 2042.

**First Generation Magnox Storage Pond**

This has been a landmark year for FGMSP with the opening of the Sludge Packaging Plant (SPP1) providing a route for large quantities of sludge to be pumped out of the pond for the first time in its history.

Trials are ongoing to demonstrate capability of the facility with the start of bulk retrievals scheduled to begin early in 2016/17.

An impressive year at FGMSP ended with the plant achieving all eight of its success criteria milestones agreed with the NDA and perhaps most importantly passing three million man hours without a Lost Time Accident – an impressive achievement given the challenging nature of operations in the facility.

**Magnox Swarf Storage Silo (MSSS)**

MSSS remains perhaps the most challenging programme in the NDA’s entire estate. It combines an aging building, a varied inventory, a technically challenging retrieval plan and a reliance on several new downstream plants which will ultimately sort, treat and package its waste.

The focus remains on both the construction of the three giant Silo Emptying Plant (SEP) machines, which will empty the facility of its contents, and on strengthening the building itself in order for it to support decommissioning activities.

During 2014/15 construction of the first of the SEP machines was completed. The machine is now ready for dismantling at its manufacturing site in the West Midlands and is scheduled to arrive on the Sellafield site for installation during 2015/16.

A further significant milestone was achieved in MSSS during 2014/15 with 10,000 terabequerels of radioactivity now removed from the 50-year-old store via the Liquor Activity Reduction (LAR) project.

Also this year, work was completed on a 15 metre high tower which will help strengthen the MSSS building.
Pile Fuel Cladding Silo (PFCS)

The PFCS programme remains in the design phase as the detailed plans are put in place for the safe retrieval, treatment and storage of waste from this aging and highly hazardous building.

SL completed the Retrievals Concept Design during 2014/15 and took a significant step in the decommissioning process when it selected two UK businesses to manufacture stainless steel containers to store waste from the silo: Darchem, an established nuclear industry supplier based in Stockton-on-Tees and Metalcraft, a new-entrant SME from Cambridgeshire.

There was disappointment in west Cumbria, shared by the NDA and SL, that a compelling local bid did not emerge during this procurement.

I know that SL and Britain’s Energy Coast (BEC) did everything possible to find a west Cumbria solution to this procurement but sadly this was not possible this time.

We will be urging SL and BEC to help the local supply chain understand the lessons from this process in order to put themselves into a better position for success when the second, and larger, phase of this contract is let.

PFCS is another Sellafield programme with a strong commitment to safety and this was underlined during 2014/15 when it reached the milestone of three years without a Lost Time Accident

**NDA assurance activities**

The NDA continues to intervene at Sellafield where performance shows cause for concern as well as providing routine performance monitoring, sanction assurance, procurement assurance (approval of strategies and procurement placements) and ad-hoc targeted assurance.

Since our last report to the WCSSG, NDA interventions have included:

**Magnox Swarf Storage Silos Programme (MSSS)**

- Programme Level Business Case approval
- Sellafield Direct Encapsulation Plant (SDP) post mobilisation readiness review
- MSSS retrievals Sanction
- Interim Storage Facility (Benchmarking)

A major priority has been assurance of the progression from the SDP Mobilisation phase into the Detailed Design Phase. The NDA’s assurance team participated in a joint, two stage readiness review in April.
Pile Fuel Cladding Silo Project (PFCS)

NDA’s assurance team has prioritised three main areas:

- readiness to emerge from the ‘design pause’ and alignment with the NDA ‘gated’ process
- technical assurance of the retrievals/waste handling capability and the level of robustness of the revised Hazard Management strategy
- acquisition strategy approach

Other areas of intervention requiring intervention from the NDA assurance team:

- Evaporator D
- Separation Area Ventilation (SAV)
- FGMSP Value engineering support
- Spending Review Assurance
- Sellafield Management Change (SMC)

Pete Lutwyche, Sellafield Programme Director, NDA