

Winfrith Overview

Steve Parkinson - Regional Director



Visit Timetable Monday 3rd March

- 12.00 Welcome and Introductions
- 12.30 Lunch
- 13.30 SGHWR Presentation ■ Business Plan
- 14.00 A59 Presentation
- 14.20 WETP Presentation
- 14.45 A544 Presentation & Moducon
- 15.15 SGHWR Visit
- 16.30 Q&A
- 17.00 Depart

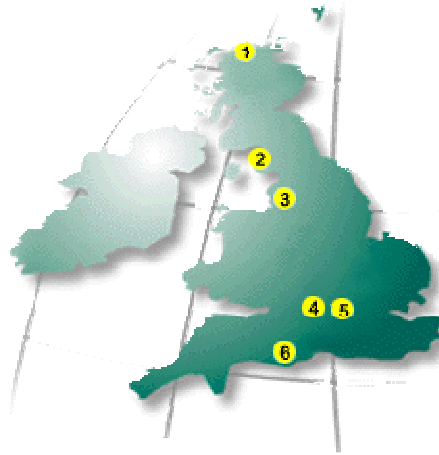
Visit Timetable Tuesday 4th March

- 8.30 Meet in WOMAD Conf Room
- 9.00 WETP Facility Tour
- 10.00 A59 Site Tour ■ Business Plan
- 10.45 A544/Moducon Visit
- 11.45 Lunch
- 12.45 International Business Meeting / Visitors Depart

Hosts

Steve Parkinson,	Regional Director, South
Keith Miller,	Business Manager
Nick Brown,	Project Manager
Brian Riley	Project Manager
Gary Clothier,	Project Manager

UKAEA Managed NDA Sites



- 1 Dounreay
- 2 Windscale – Will be BNG
- 3 Risley
- 4 Harwell
- 5 Culham – Not NDA yet
- 6 Winfrith

History

- Won PIE Facility Operations Contract inc. divestment of 24 UKAEA Staff - 1996
- Won £30m WOMAD Contract - 1999
- Won Term Contract - 2000
- Won TRS Refurbishment - 2001
- Won SGHWR Contract 1 - 2005
- Now at 160 Staff based at Winfrith

Overview

- Growth from £1.5m p/a in 1996 to £12m + in 2006
- 160 staff of mixed disciplines
- Undertake the majority of UKAEA contracts at Winfrith
- Decommissioning, Operations, Maintenance, Implementation
- Decommissioning Planning

Projects

- WOMAD – EAST WETP, A59 Decommissioning
- Term Contract
- SGHWR Contract One
- Land, Building Remediation (off site)
- Engineering Services
- NORM Decontamination – BP
- Decommissioning Planning – UKAEA, BNG and BE
- ModuCon (Modular Containments)

Key Strengths

- Decommissioning
- Facility Operations
- Facility Maintenance
- Decontamination
- Strong Safety Culture
- Experienced and Qualified Team
- Health Physics

Key Strengths

- Project Management
- Detailed Planning
- Safety Cases
- Local Site Based Design Team
- Co-Location with Clients
- Culture Change

Winfrith Operations Maintenance and Decommissioning - WOMAD

- **Contract value:** £30 million
- **Scope of contract:** Decommissioning of the research centre including:
 - Decommissioning of a hot cell complex
 - Construction of a treatment centre for wet waste recovery and packaging
- **Duration:** 2000-2009



A59



Active Handling Building - A59



Decontamination Milestone



External Active Sludge Tanks, EAST

- The EAST are a set of four tanks containing radioactive sludges from the operation of the SGHWR reactor.
- The total volume of sludge is about 300m³.
- The sludge is stored in liquid form.

EAST



EAST

- Build a new Process Plant
- Safety Case
- Design
- Build
- Commission
- Operate
- Decommission

WOMAD EAST Treatment Plant - WETP



WETP Operation

- Plant Commissioned – 2006
- Fully Operational
- Target 5+ Drums / day
- Complete sludge retrieval early 2008

SGHWR and DRAGON Reactors

- SGHWR was a prototype reactor which was considered for the UK's second generation of power reactors. It was operated between 1967 and 1990.
- DRAGON was an experimental high temperature reactor, operated between 1964 and 1975, as a joint European project.
- Both reactors have been decommissioned to Stage 1 and are now at Stage 2.

SGHWR and DRAGON



DRAGON Fuel



Waste Processing

- Critical to the success of any decommissioning task
- Clearly defined routes, ILW, LLW, Exempt Release
- Core team members
- Excellent housekeeping
- Everything traceable
- Clear records

Waste Volumes

- Recycling a key feature
 - Refurbished manipulators
 - Sell or donate other items
- Have been generally very low helped by
 - Incentivised contract
 - Close attention to dismantling and size reduction
 - Pragmatic interpretation of legislation
 - Obtaining the best packing fraction

SGHWR – Prototype Power Station



SGHWR 1

- Stage 1 of the Final Reactor Decommissioning
- NEC Option A – Fixed Price with Activity Schedule
- Waste Incentives
- Schedule Penalties
- Currently 30 months – Further work awarded, but now subject to NDA cuts
- ~ £8m

The Refurbishment and Commissioning of the Treated Radwaste Store



- £1.6 M Contract Value
- NEC Option C, Actual Cost
- Existing facility built 10 years ago and then not used
- During this period under minimum care and custody

TRS



The project required the installation of:

- a new SCADA control system
- the refurbishment of two cranes
- the over-cladding of the vertical faces
- the new installation of a fire detection and alarm system
- a heating and ventilation system to maintain the building environment within strict NIREX requirement conditions

TRS



- Following refurbishment, the facility was commissioned in two phases, non active and active using drums from WETP.
- The refurbishment works were supported with all stages of Safety Documentation requiring both UKAEA and Regulatory Body approval.

TRS

- NUKEM incentivised to control project costs
- No surprises in final account
- NEC Ethos,
 - Strict Timescales
 - Early Warnings
 - Non confrontational
 - Spirit of mutual trust and Co-operation

Engineering Services for Decommissioning (ESS)

- Up Front Concept and Scheme design
- Engineering, Consulting
- Reimbursable, low risk
- Good platform for reactor decommissioning

Overall Summary

- Co-location of teams great benefit
- NEC used as a platform to foster good teamwork
- Both teams objective must be the project success
- Project Managers must share all information
- If possible use joint systems
- Teamwork