

INTERNATIONAL EXCHANGE REPORT

1 Visit Reference	3960
Aegis	JOWOG 39
Project Contract/ Major Task Ref	EH
Doc Ref. No.	
Date	27 July 2006

ATTENDEES

2		Facilities Visited	Dates	Hosts
1.	[REDACTED]	Y12, Oak Ridge, Tennessee	17 - 19 July 2006	[REDACTED]
2.	[REDACTED]			
3.	[REDACTED]			
4.	[REDACTED]			
5.	[REDACTED]			
6.	[REDACTED]			
7.	[REDACTED]			

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OBJECTIVES (from visit approval)

3 The aim of the visit was to review progress on the JOWOG 39 [REDACTED] collaboration programme with Y12, introduce the AWE project team and to progress exchange activities on the AWE and Y12 [REDACTED] projects. The topics discussed were:--

- AWE / Y12 project progress
- Storage
- Coolant Management / swarf (chip) management
- Criticality assessment principles
- Heating and ventilation design principles
- Operating methodologies
- Process modelling

EXECUTIVE SUMMARY

Information Exchanged / Achievements / Future Collaboration

4 This visit is part of a collaborative programme arising from a joint AWE / Y12 review of the AWE Enriched Uranium Project (EUP) and the Y12 Uranium Processing Facility (UPF) project undertaken in May 2005. EUP and UPF project progress was exchanged. UPF has a new Project Director, [REDACTED], who replaces [REDACTED]. [REDACTED] UPF has been submitted to DOE for Critical Decision point 1 (CD1) approval, which is expected to be received in early 2007. The estimate at this stage stands at \$1.3Bn. The Y12 team also presented progress with the construction of the new storage facility (HEUMF) and also the lessons learnt from recent programme delays. The AWE team gave a progress update and presented the recent work developing the two phase approach. Progress against the previously agreed exchange topics was reviewed. The exchange programme was updated. Two further exchange visits at AWE are planned in September 2006 (criticality safety and fire protection) and in October 2006 (Ventilation design, containment and material handling, modelling and requirements capture).

5 Prepared by	[REDACTED]	Visit Leader
Approved by	[REDACTED]	*JOWOG Leader <input type="checkbox"/> / PCM <input type="checkbox"/> / CCM <input type="checkbox"/>

*select as appropriate

This visit is part of a collaborative programme arising from a joint AWE / Y12 review of the AWE Enriched Uranium Project (EUP) and the Y12 Uranium Processing Facility (UPF) project undertaken in May 2005.

The Y12 team gave an update on the progress of the future UPF project. The project was initiated to consolidate uranium operations into a single modern facility and address escalating security and operating costs by significantly reducing the high security area (PIDAS) and the number of operational facilities. UPF has been submitted to DOE for Critical Decision point 1 (CD1) approval. The estimate at this stage stands at \$1.3Bn. Approval has been delayed and the project tasked with a 15 point action plan influenced by the lessons learnt arising from the construction of the new Y12 storage facility (HEUMF). CD1 Approval is expected early in 2007.

The HEUMF construction site was visited and progress reviewed. Underpinning foundation work has been completed and fabrication of rebar is well advanced. Some delays have been suffered due to quality control and inspection issues. The root cause was a lack of nuclear engineering experience in the construction industry caused by the low level of demand in recent years. Rebar fabrication was given as a specific example, where the tolerances and densities required were beyond the normal experiences of the civil contractor.

The AWE team gave an update on the progress of the Enriched Uranium project (EUP) and the recent work developing the two phase approach was presented. A high level project programme was also presented.

The outcomes of the 2005 joint project review were discussed. This review had identified a number of topics that were agreed to be taken forward as part of a collaborative programme. Progress against each topic was reviewed and the programme updated..

The forward plan includes the following topics:-

Design

- Heating and ventilation
- Containment and handling
- Modelling

Process Development

- [REDACTED]
- Agile Machining

Policy / strategic

- Requirements Capture
- Fire protection standards
- Security
- Criticality safety
- Operational / staffing approach
- Workforce restructuring

Business

- Peer review
- Value engineering
- Personnel exchange

Further Safety Case information supporting the EUP storage design is being provided by Y12 .

In September 2006 AWE will be hosting the second part of a criticality safety exchange, comparing assessment methods and limits in use across Y12 and AWE. This work is informing the design and safety case work of the AWE enriched uranium project. Information will also be shared on fire protection standards for nuclear facilities as Y12 are concerned about the impacts of their standards on the design and construction of new plant.

AWE is also planning to host a further exchange in October 2006 to address the following topics:-

- Lessons learnt from Ventilation system design at AWE
- Requirements capture methodologies
- Process containment and materials handling
- Process modelling
- Peer review of the enriched uranium Project FEL 2 submission