

**THE RAISING AND RECOVERY OF THE
RUSSIAN FEDERATION NAVY
NUCLEAR POWERED SUBMARINE *KURSK***

KURSK – DIVING FOR NOT SO MUCH FUN

ILLUSTRATED PRESENTATION FROM

JOHN H LARGE

LARGE & ASSOCIATES – CONSULTING ENGINEERS



In May 2000 John Large was engaged jointly by a Dutch salvage consortium Smit-Mammoet and the Russian Federation Government to assess and advise on the nuclear and radiological hazards associated with the salvage and recovery of the nuclear powered submarine *Kursk*. For this, Large assembled a team of UK-based experts in nuclear submarine, nuclear safety and risk assessment, weaponry and radiological management fields.

The team's first task was to assess the nuclear and radiological hazards, using the original design information and data for the boat, its reactors and weaponry. This was done by determining the damage to and potential instability of the nuclear reactors and weapons from records giving clues as to why and how the submarine sank in Autumn of 2000, from the forensic evidence available from the seabed, and drawn from inspection of the sister submarine the *Urel*. The second task for the team was to assess the salver's recovery plans, determining how these activities would impact upon the nuclear and radiological systems of the damaged submarine. The third task was 'hands-on' with practicable involvement of the team members on board the salvage flotilla to provide in situ interpretation of the radiological monitoring systems and, importantly, immediate advice should a nuclear situation develop.

John Large will present a fully illustrated lecture on how the nuclear safety case was developed, implemented and maintained throughout the difficult but ultimately successful recovery operations of the *Kursk* in October 2001 – a world-first salvage of a nuclear-powered submarine.

ASHFORD DIVING CLUB – ASHFORD, KENT – 20.00 HOURS, 24 FEBRUARY 2005

Contact the Club Secretary for further details secretary@ashforddiveclub.com