

FAX FROM :

EL-TECH TECHNOLOGIES INC. (SIMSITE)
 NORTH CAROLINA OFFICE:
 325 QUEENS ROAD, APT. 7 . CHARLOTTE NC 28204-3256
 TEL : (704) 375 9313 FAX: (704) 375 9321

SEND TO/*From***F. HARDY.****SIMS***Attention**Date***Mr. George H. Yochum. Sales, Marketing.****Feb 10th 1998***Fax Nr.***201 792 4803***Phone number***201 792 0600***Urgent/**Reply ASAP/**Please comment/ Please review/ For your information/**Total pages, including cover sheet:***1****COMMENTS**

Re: SIMSITE Bearings in Allis Chalmers 40ft x 245,000 gal/min Vertical Pumps at Duke Energy Corporations McGuire Nuclear Station, Hagers Ferry, Huntersville NC. Interview with Mr. John Sigmon. Maintenance Department, Hagers Ferry, Feb. 10th 1998. Tel (704) 875 4289.

In late December 1997/early Jan. 1998 the second of 8 Allis Chalmers 40ft vertical pumps was fitted with SIMSITE composite bearings. Lower bearing 37" long x 10" bore. middle and top bearing 19" long x 10" bore. (George please check the dimensions and add the outside diameter)

The Allis Chalmers CCW condensate pumps each with a capacity of 254 000 galls /min. are located on Lake Norman NC. The 40 ft high x 10" shaft vertical pump fitted with a 236 RPM x 1500 HP motor pump water from Lake Norman into the RC (river circulating) system, supplying water to the nuclear power stations main turbine condensers and several take-offs for feed water pumps. The 96" pump discharge is low at 6 to 7pounds. When Lake Norman is full the lake water level is almost at the pump discharge level. Duke Power technicians were pleased with the dimensions to which the bearings were machined. The 37" long x 10" bore lower bearing was smeared with Loctite RC 680 Cylindrical bearing mounting lubricant to help slide it into the bearing seating. The lower 37" long bearing is held with lock screws. The middle and upper bearing have a press fit with no locking screws. No priming of the pump is required. The pumps were originally fitted with Cutlass rubber bearing. These were found to have a short bearing life. Then Thorndon bearings were tried but found to be too soft and the lubricating slots in the bearing tended to close up. The Thorndon bearings were held in position with glue. Temperature change (heated workshop to outside winter temperature) tended to shrink the Thorndon bearing, break the glue and loosen the bearing. SIMSITE was found to be more dimensionally stable when subjected to temperature change. A further 6 such pumps on Lake Norman will be fitted with SIMSITE bearings.