Insulator Failure on a Morris Line ABSW at Mill Farm, Beeston.

During final opening and closing checks following the conversion of a handle operated Morris Line ABSW to “hook stick” operation, the lower end of the insulator on the rocking insulator on one of the three units failed causing porcelain shards to fall. Although none of the electrical sections of the switch failed, the switch was inoperable until a repair was undertaken to replace the faulty unit.

Fortunately the operator was wearing appropriate PPE including his safety helmet which greatly reduced any injury that could have occurred due to this incident

An almost identical incident was reported to have occurred during a similar operation a few weeks earlier at Aston Grange ABSW, however, in both cases staff report that visual inspections and risk assessments prior to the works commencing showed no indication of, or the potential for, damage.

Many ABSWs of this type have been successfully converted to “Hook Stick” operation, however, staff must be aware that the mechanical forces applied to the ABSW under Hook Stick Operation may be different to those previously encountered by the ABSW such that care must be taken whilst operating this type of switch.

Mill Farm ABSW Following Retro-fit

Aston Grange ABSW

Mill Farm ABSW

Recommendations and action points

Operating “Hook Stick” Type ABSWs

• Operators of this type of switch shall visually check the switch for signs of damage before use and wear all appropriate PPE, in particular hard hats and light eye protection

Converting/Installing “Hook Stick” Type ABSWs

• Prior to the removal of the original handle mechanism, check the stroke length such that the correct hole is used in the replacement hook stick operating mechanism.

• Ensure the back-stops are fitted and set to prevent the rocking insulator from over-travel against the fixed contacts. If backstops are missing and cannot be fitted retrospectively then consideration must be given to replacing the ABSW.