Proposed Updates to Table 8 – Internal Inspection of Main Tank IEEE C57.125

	Main Tank	Recorded Data
Insulating Liquid		
	Odor of insulating liquid (different than new, unused base fluid)	
	Color of insulating liquid	
	Indications of water or acids, and their locations in the tank	
	Free water in tank and estimated amount	
	Presence of gelled fluid deposits (particularly for esters)	
	General viscosity of insulating liquid (i.e. thick, easily flows, etc.)	
	Evidence of low insulating liquid level inside tank	
	Samples for analysis (DGA, power factor, dielectric breakdown, moisture, neutralization number, interfacial tension, oxygen inhibitor, water, particle count, viscosity, others)	
Debris (Type)		
	Amount (i.e. piles, spread throughout, etc.)	
	Location(s) (i.e. suspended in oil, on windings, on floor, in pipes, etc.)	
	Color of debris	
	Appearance(s) (i.e. metallic looking, dull, cellulose-looking, etc.)	
	Shape(s) (i.e. irregular, spherical, etc.)	
	Approximate size(s) (i.e. powder-like, sand-like, etc.)	
	Hardness of particles (i.e. soft, rigid, etc.)	
	Plume/point source of debris apparent – if so, where?	
	Samples for analysis (number of samples, locations, tests to be performed, etc.)	
Burns, discoloration, pitting or welded deposits (which are the result of arc or stray flux overheating in areas such as)		
	Tank walls, roof, and floor	
	Bushing terminals (high voltage, low voltage)	
	Corona shields	
	Metal connectors	
	Bus bars	
	Ground pads and leads	
	OLTC casing	
	DETC components	
	Windings	
	Miscellaneous (i.e. by ports, by pipping spacers, support cellulose, etc.)	
Loose connections or splices to		
	Tap leads (DETC and OLTC)	
	Bushings leads	
	Terminal boards	
	Collars	
	Bracing	
	Spacers	
	Core ground strap	
Condition of DETC		
	Discolouration of any of the components	
	Pitting, delamination, and/or softening of any of the components	

	Contacts	
	Operating mechanism	
	Coupling shaft	
	Shielding	
	Bracing	
	Location of DETC inside tank	
Carbon tracking		
	Location(s)	
	Amount of carbon tracking (i.e. path width, path length, etc.)	
	Continuous tracking or breaks in tracking path	
	Carbon able to be wiped off the surfaces of the tracking path	
	Noticeable pieces of material missing from surfaces at or around tracking (i.e. pitting)	
	Porcelain damage	
	Copper, aluminum, or other metal splatter	
	Copper, aluminum, or other metal softening	
	Spongy insulation or leads	
	Welding of metals near on or near path of tracking	
Conditions/observations of windings and leads		
	~~Lead clamping~~	
	Clamping, metal supports, and connections (i.e. bolts, nuts, washers, conductors, etc.)	
	Winding support system	
	Winding distortion	
	Winding movement	
	Insulation discoloration	
	Sections of insulating missing	
	Copper, aluminum, or other metal softening	
	Spots of darkening on winding metal or solid insulation	
	Noticeable pieces of material pitting or missing from windings or leads	
	Winding insulation contamination due to insulating liquid circulation after the fault	
	Lead distortion	
	Lead movement	
	Condition of series transformer	
	Condition of preventive auto	
	Indication of local hot spots	
	Connection overheating (squeeze all accessible connections)	
Condition of Current Transformer (CT)		
	Overall condition	
	Hot-spot measurement system wiring	
	Support brackets	
	Tank wall penetration block	
Condition of Core		
	Electrical wiring to core	
	Signs of overheating (i.e. heat stress colouring, softening, etc.)	
	~~Abnormal test results of insulation resistance from core to ground~~	

	~~Evidence of low insulating liquid level inside tank~~	
	Tank wall stray flux shunt packs damaged	
	Core ground connection at core	
	Rust on core (location and amount)	
	Condition of yoke bolts	
	Loose core steel	
	Flaking, pitting, or discolouration to core steel	
	Other evidence of core damage (i.e. regions of softening, etc.)	
	Condition of core framing structure (i.e. welds, deformation, etc.)	
Condition of conservator or nitrogen system		
	Condition of conservator bladder (if present)	
	Condition of external desiccant (if present)	
	Position of valves to and from conservator or gas blanket	
	Type of gas plumbed on bladder or blanket (if present)	
	Pressure value of gas used on system compared to system pressure specifications (if present)	
	Pressure and level of gas tanks after incident (if present)	
	Condition of piping/tubing for gas blanket system	